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ABSTRACT

This exploratory study conducted for the Women's Action Program of HEW aimed at identifying and exploring the barriers to success that women face as school applicants and students and at describing the discrimination process, if any, that limits women's entry into the health professions. In this report on veterinary medicine, the profession is introduced, giving a sense of its history, work focus, organization, and women's roles and status in it. Current trends and issues, the organizational network, schools, and the professional training sequence of veterinary education are reviewed. Students are discussed with regard to what the profession is looking for in new members and to the students' own characteristics. Recommendations are offered for the associations, schools, and researchers. Statistical data, interview responses, and a bibliography are included. (LBH)

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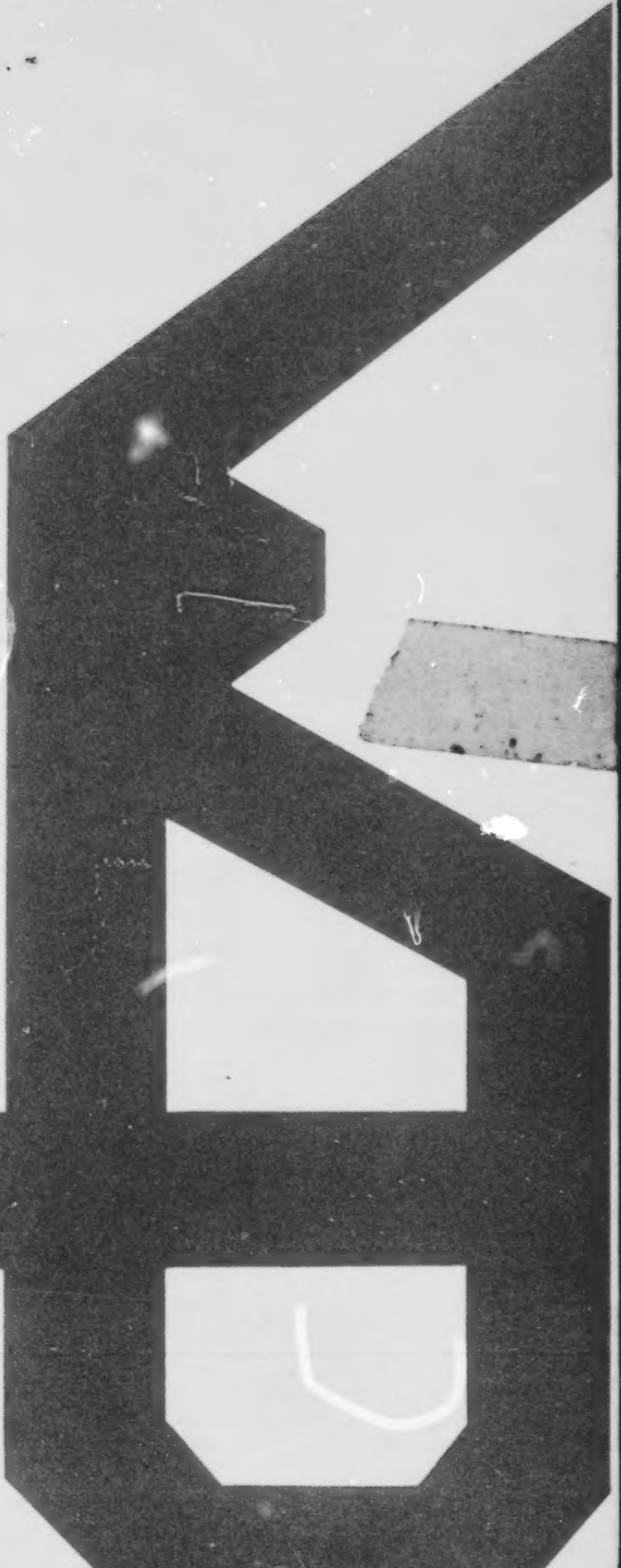
AN EXPLORATORY STUDY OF WOMEN IN THE HEALTH PROFESSIONS SCHOOLS



VOLUME V: VETERINARY MEDICINE

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WOMEN'S ACTION PROGRAM
Department of Health, Education, and Welfare

EXPLORATORY STUDY OF WOMEN IN THE HEALTH PROFESSIONS SCHOOLS

VOLUME V: WOMEN IN VETERINARY MEDICINE

Prepared for

The Women's Action Program
Office of Special Concerns,
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The opinions and conclusions expressed in this report are URSA's and do not necessarily reflect those of the Department of Health, Education and Welfare.

Women definitely have a problem with the older generation--you run into some classic comments. An 83-year-old rancher said to me, 'I could see where a woman vet could be a real asset to a practice. She could stay in the office and answer the phone and could really be a help around the office.' (Fourth year student, female)

My colleagues have come around pretty well, at least at this school. Sure, they sit around and mumble and grumble, but when it comes right down to it, they have to admit that the girls do the work better, or at least as well. And they are just as much fun to work with as the males. (Clinical faculty, male)

PREFACE

The Exploratory Study of Women in the Health Professions Schools was conducted by Urban and Rural Systems Associates (URSA) for the Women's Action Program (WAP) of the Department of Health, Education, and Welfare (HEW) under Contract Number HEW-OS-74-291. The study focuses on eight health professions generally known and referred to as the MODVOPPP professions: medicine, osteopathic medicine, dentistry, veterinary medicine, optometry, podiatry, pharmacy, and public health.

Study Purpose

The study's central tasks have been to identify and explore the barriers to success which women face as MODVOPPP school applicants and students and to describe the discrimination process, if any, which limits women's entry into these health professions. Its central purpose--indeed its primary product--has been the development of conceptual models of the recruitment, admissions, and education systems designed to maximize equal opportunities for women and to encourage their success as school applicants and students in the MODVOPPP professions. The models are the basis for guidance and recommendations intended to assist HEW, the MODVOPPP educational and professional associations, the MODVOPPP schools, and appropriate others to eliminate barriers women face and/or to minimize their impact.

Study Design and Methods

The study was purposefully exploratory in its design. According to the Request for Proposal (RFP) which resulted in the contract, "The exploratory approach taken for this study is based upon the realization that not enough is known about the process of discrimination to permit more systematic research, or to assess alternative forms of intervention designed to achieve equal opportunity based on sex." A common purpose of exploratory studies is to identify and raise issues important to an understanding of a topic under investigation. The power of exploratory research is to illuminate issues in settings and systems which are complex and where simple variables and variable clusters are inadequate to explain and establish causal relationships. Thus exploratory studies do not normally test hypotheses, they generate them. Their purpose is not to quantify the frequency, magnitude, or distribution of events or phenomena, nor do they measure statistical correlations among events or between events and characteristics of people, institutions, professions, or other categories of systems variables. Rather their purpose is often to define complex systems through descriptive or predictive models which may be subjected to a variety of tests or evaluations in subsequent stages of research. This study's goal of developing success models for women as applicants to and students in the MODVOPPP health professions schools was thus the basis for selecting an exploratory study design.

URSA implemented the design by collecting and analyzing extensive data about the MODVOPPP professions and schools and other pertinent topics and issues. Information was gathered from the following sources:

- Interviews with almost 600 individual MODVOPPP school administrators, faculty members, and students in 27 MODVOPPP schools around the country. These were open-ended, purposefully unstructured interviews designed to surface the widest possible range of issues from a broad spectrum of respondents. They were supplemented by over 60 group interviews in which an estimated 440 men and women students participated.
- Interviews and correspondence with staff members of the professional association, student association, women's professional association, and/or association of schools and colleges in each of the MODVOPPP professions.
- Written documents prepared by and collected from the MODVOPPP schools and associations such as recruitment brochures, school catalogues, financial aid (loan and scholarship) programs and policies, school admissions committee procedures, descriptions and instructions for use of centralized application services, and so on.
- The professions' various current and, when available, historic journals.

- Available statistics on the professions' practitioners, schools, applicants, and students.
- Interviews, correspondence, and meetings with individuals and groups conducting special studies and research in and about the professions, about women in the professions, sex role behavior and learning, and other related topics; and surveys of available studies, research, and relevant literature in these areas.
- Interviews, correspondence, and meetings with representatives of HEW health policy and program agencies and reviews of pertinent federal legislation, regulations, guidelines, and other documents related to health education policy and programs.

All of this information was subjected to qualitative forms of analysis intended to identify conflict and consensus among various sources of information regarding barriers women face as MODVOPPP applicants and students and to identify exemplary policies and programs sponsored by MODVOPPP schools and associations which appeared to eliminate and/or minimize the impact of these barriers. These analyses were the basis for developing the recruitment, admissions, and education models called for by the contract.

Scope of Study Research: Variations Among the MODVOPPP Professions

MODVOPPP students and schools are all designated as potential recipients of federal financial aid under the Comprehensive Health Manpower Training Act of 1971 (PL 92-157) Public Health Service Act; and schools receiving assistance under the Act are subject to its Title VII affirmative action and non-discrimination requirements.

Inclusion in this Act is the common basis on which the MODVOPPP professions were included in this study. Beyond this common feature, however, and the obvious fact that the MODVOPPP professions are all health professions, preliminary study research suggested that in many significant ways the professions are more different than they are similar and that these differences might have great significance for women as applicants to and students in the schools. The

MODVOPPP professions vary greatly in size, for example, with the largest, medicine, having well over 300,000 active practitioners and the smallest, podiatry, having barely more than 7,000. This variation also appears in the number of operational training institutions with medicine having over 100 schools and podiatry only five. The professions differ in public visibility and general knowledge. Everyone knows of doctors, dentists, and veterinarians and knows generally what they do. Not everyone knows what DOs (doctors of osteopathic medicine) or podiatrists are or what they do. Some of the professions are clearly defined as and accorded the social status and other rewards of a profession while others, in the public view, may be more often thought of as a good occupation or a good business. To some extent varying public definitions of profession vs. occupation vs. business reflect different practice patterns and organization. Some of the professions--for example, optometry--are more often practiced in entrepreneurial business forms such as solo or partnership practice than others such as public health which includes opportunities for practice in schools, hospitals, health departments, and other employer institutions.

Variations in professional training are also great. A first professional degree sufficient for practice is possible in some sections in public health within a year; in medicine the minimum is normally five years and the average, depending on specialty selection, much longer. Cost of training varies. Entry requirements to the schools vary. Curriculum content and structure among professions vary.

Finally, and most obviously, the presence of women as practitioners and as students, both historically and currently, varies enormously among the eight MODVOPPP professions, and some are much more heavily sex-typed than others. In pharmacy, for example, about 9% of the active practitioners were women in 1970; however, increasing enrollments of women in schools of pharmacy resulted in women representing 24% of first year enrollments in 1970-71. By contrast, women represented only 3% of active dentists in 1970 and only 2% of first year enrollments in 1970-71.

These most obvious differences among the professions--and others not so obvious--led the URSA study team to conclude that a portion of our research effort must be devoted to an examination of each of the MODVOPPP professions singly and as a separate and distinct social system with its own particular history, forms of practice, professional and training institutions, and practitioners and students. The purpose of conducting eight "mini-studies" on the MODVOPPP professions was to identify any characteristics of each profession--its history, organization, and other important features--which might contribute to an understanding of the role and status of women in that profession and to an identification of the barriers women face as applicants to and students in the profession's schools.

Organization and Contents of the Final Report(s)

As a result of our decision to conduct these studies of each MODVOPPP profession, the study's findings, conclusions, and recommendations are reported in a ten-volume final report. The ten volumes are:

VOLUME I:	Part 1: DATA ANALYSIS, FINDINGS, CONCLUSIONS, RECOMMENDATIONS
	Part 2: APPENDICES
VOLUME II:	MEDICINE
VOLUME III:	OSTEOPATHIC MEDICINE
VOLUME IV:	DENTISTRY
VOLUME V:	VETERINARY MEDICINE
VOLUME VI:	OPTOMETRY
VOLUME VII:	PODIATRY
VOLUME VIII:	PHARMACY
VOLUME IX:	PUBLIC HEALTH
VOLUME X:	ANNOTATED BIBLIOGRAPHY

VOLUME I includes a discussion of the study's major findings regarding barriers women face as applicants to and students in the MODVOPPP professions. It presents the recruitment, admissions, and education models which are designed to eliminate those barriers. It suggests a series of further research and action recommendations for attention by HEW, the MODVOPPP professional and educational associations, and the MODVOPPP schools. VOLUME I also presents a detailed description of the study's methods.

The several Appendices to VOLUME I include samples of the study's data collection and analysis instruments; a summary of the major issues raised by men and women students in group interviews; financial aid sources, policies, and problems students experience; a survey of the roles and status of women in the MODVOPPP professional associations; statistical tables used by the URSA study team in conjunction with field interview and document review data; and a discussion of data gaps confronting the researcher in the MODVOPPP health professions with recommendations regarding data needs. In this regard, it is important to note and to stress that both the relative absence of minorities in the MODVOPPP schools and professions coupled with the absence of statistical data about applicants, students, and practitioners available by both race and sex simultaneously has necessarily limited the findings and conclusions in this study to Caucasian women. To prevent such research limitations in the future, one of our most urgent data recommendations is that statistical data always be made available and presented by both minority status and sex together rather than singly.

VOLUMES II-IX, the individual MODVOPPP professions reports, are designed to serve as a brief introduction to each profession--an introduction which gives a sense of the profession's history, work focus, organization, and women's roles and status in it. The study's ANNOTATED BIBLIOGRAPHY, VOLUME X, includes a list of the major bibliographic sources used in our research and preparation of all of the study's reports.

Taken as a group, the eight individual professions' studies and reports include the bulk of the total study's findings and are the collective basis for the conclusions and recommendations presented in VOLUME I, DATA ANALYSIS, FINDINGS, CONCLUSIONS, RECOMMENDATIONS. Under optimal circumstances, each individual profession's report should be read in combination with and after VOLUME I. However, in anticipation of the possibility that individual profession's volumes may be read alone, there is a certain amount of repetition and duplication of information among the eight professions reports and between them and VOLUME I.

In addition to serving as an introduction to each profession, VOLUMES II-IX also have two other purposes. First, each of the individual reports includes a short set of recommendations designed to address some of the problems women experience which are unique or particular to the profession and which are best considered for implementation by either the schools directly or by the profession's various key associations.

Second, the extensive use of direct quotes from our field interviews with administrator, faculty, and student respondents in school site visits provides a vivid description of women students' experiences in the male-oriented environments of the MODVOPPP health professional schools; the extent to which these experiences are unique to women and not shared by male students; and the extent to which these experiences serve as barriers to women as applicants to and students in the schools. Collectively these reports of women's experiences also demonstrate that in spite of the very real and significant size, structural, work, and practice differences among the eight MODVOPPP professions, women's experiences in these professions and their schools are more similar than they are different in many important ways.

WOMEN IN VETERINARY MEDICINE

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I. OVERVIEW

All of the health professions included in this study, with the exception of veterinary medicine, share a common client--the human body--and thus spend at least some of their professional energies on staking out and maintaining their authority over their piece or function of that client. Veterinary medicine has the luxury of having non-human animal health care all to itself. The veterinarian does not treat human patients at all but has the authority and the training to perform all aspects of health care on animal patients including diagnosis, use of available medical therapeutic techniques, prescription and administration of drugs, and surgery.

Veterinary medicine does have specialities and specialists as human medicine does. Some of these, such as radiology and dermatology, parallel human medicine, while other specialties are organized around species rather than functions. Thus a veterinarian may specialize in small animals or large animals, or in horses (equine), pigs (porcine) or cows (bovine).

Specialization in veterinary medicine is, however, quite a different phenomenon from what it is in human medicine. Not only are the specialties fewer and less narrow, a specialist is less likely to restrict his or her practice solely to specialty work. Even more important is the fact that specialization apparently has not created a status hierarchy in the way that it has in medicine. Because veterinary medicine's specialties most often are based on species rather than functions, the bases for hierarchical differentiations are not present. The potential for status differentiation between, for example, cow or pig specialty practice, has apparently failed to develop within the profession because practitioners perform essentially similar functions for both species.

The profession is small compared to human medicine--26,000 licenses practitioners as opposed to more than 300,000 MDs. It operates 19 professional schools compared to human medicine's more than 100. (Four new schools are planned.) Veterinary medicine is larger than podiatry, osteopathic medicine and optometry but very much smaller than medicine, pharmacy, and dentistry.

Practitioners tend to cluster in the 18 states that have professional schools and to be in short supply in many of the smaller rural states. Just over 6,000 students are currently enrolled in schools of veterinary medicine. The profession's small size and its relative degree of geographic concentration allows the profession to operate in an informal way relying heavily on informal, personal networks in professional activities and in student placements and referrals. Relative to human medicine, everybody knows everybody in veterinary medical education and the schools tend to know what other schools are doing. This style of operation is reinforced and maintained by the fact that a Council of Deans handles inter-institutional matters of professional education instead of the usual more extensive association of professional schools.

Veterinary medicine has been more involved in public sector activities than perhaps any other of the MODVOPPP professions except for public health. Advances in veterinary medicine have been seen as a matter of the public interest since the Civil War. Their incorporation into land grant colleges and agricultural extension programs is a logical outgrowth of this fact. Improving the yield of beef, milk, and chickens has been seen as equally important to, and in the same way a matter of public policy, as has the yield of an acre of wheat or corn. And this of course makes an enormous difference in the way in which the professional endeavor is viewed and addressed by the public sector. The fact that veterinary medical schools have been a political constituency to rural legislators--both accountable to and championed by them--is peculiar to veterinary medicine among the MODVOPPP professions. It is a fundamental, defining feature of the professional enterprise.

The public sector has played a further critical role in veterinary medicine--as an employer. The need for veterinarians in the military has, of course, been declining, but the government's role in regulation and inspection of commodities has expanded.

Veterinary medicine has been changing in recent years. Though still predominantly an integral part of the national food supply production system, the demand for health care for urban and suburban pets has been increasing dramatically. Thus, small animal specialists have become a very much more substantial part of the profession, and this is reflected in a shift in the public's view of the profession from that of a primarily agricultural function to a more humanitarian profession.

The profession's relationship with human medicine has increasingly become one of active partnership, especially where research is concerned. New areas of research are becoming a more important activity in the profession. And in veterinary medicine's primary realm--large animal medicine--technological changes have transformed the nature of work. Changes in meat production have necessitated a whole new kind of practice such as the lucrative role of feed lot vet. And the development of tranquillizing drugs and mechanical hoisting devices have transformed animal surgery from a feat of physical strength to a procedure not unlike human surgery. These changes in the nature of work in the profession have significant implications for the current and potential role of women in the field.

Until recently, veterinary medicine's public and self-image has been one of "men's work only" to perhaps a greater degree than in any of the other MODVOPPP professions. The traditional requirements for physical strength, stamina, ability to travel distances to patients, and the "barnyard" setting of the work, have combined to create a powerful stereotype that women do not only "not belong here" but simply cannot do the work. Changes in the field described above--the need for urban, small animal vets, new ways of managing large animals, the focus on new kinds of research--all have removed the basis for many of the traditional claims that women could not do the work.

Despite our findings that stereotyped views of women in the field are somewhat still more persistent and severe than in the other MODVOPPP professions, veterinary medicine has experienced a more rapid rate of increase in women enrolled in the first year class in professional schools between 1968-69 and 1974-75 than any other MODVOPPP profession--from 9% to 24.4%. Representation of women in the ranks of active practitioners, however, remains low since the increase in enrollments began only recently (see Table 1).

TABLE 1
NUMBER AND PERCENT OF ACTIVE PRACTITIONERS IN MODVOPPP PROFESSIONS
December 31, 1970

	MEDICINE	OSTEOPATHIC MEDICINE	DENTISTRY	VETERINARY MEDICINE	OPTOMETRY	PODIATRY	PHARMACY	PUBLIC HEALTH (Not Available)
Total	311,210	12,000	102,220	25,900	18,400	7,100	129,300	
Men	289,736	11,148	98 950	24,600	18,050	6,800	117,620	
Women	21,474	852	3,270	1,320	390	300	11,670	
% Men	93.1	92.9[a]	96.8	94.9	97.9	96.0	91.0	
% Women	6.9	7.1[a]	3.2	5.1	2.1	4.0	9.0	

SOURCE: *The Supply of Health Manpower, 1970 Profiles and Projections to 1990, Division of Manpower Intelligence, Bureau of Health Resources Development, Health Resources Administration, Public Health Service, DHEW, 1974.*

[a] *Percentages estimated from subtracting DOs from MDs with MDs by sex in Women in Health Careers: Status of Women in Health Careers in the United States and Other Selected Countries, Chart Book for International Conference on Women in Health, The American Public Health Association, 1975.*

Part of this increase in the proportion of women in veterinary schools is a function of the general increased popularity of the profession. Veterinary medical schools now have the highest applicant to first year places ratio of any of the MODVOPPP schools. The competition is extremely keen, but women applicants' preparation and credentials compare favorably to men's and women are generally admitted in proportion to their representation in a schools' applicant pool.

Because women are generally accepted in proportion to their representation in the applicant pool, as they have been for many years, the increase in women accepted must be attributed to the increased female applicant pool rather than to any special action of the training institutions. Though women's applications to all health professions schools increased noticeably in the early 1970s, the increase at that time was greatest in veterinary medicine and medicine. Changes in the nature of work have made veterinary medicine seem a more realistic possibility to many women. And these changes have, in reality, made the field one fully appropriate for women's full participation.

II. BRIEF HISTORY OF THE PROFESSION

THE PROFESSIONALIZATION PROCESS

Establishment of Training

Veterinary medicine in the United States began to develop from a full-time trade into a profession decades after the establishment of Western European schools. Until the 1850s, the United States' sources of veterinary graduates were primarily immigrants from France, Scotland and England. Early veterinary science was limited and had a difficult time competing with the time-honored (and often bizarre) treatments offered by farriers (horse-doctors--that is, blacksmiths). Attempting to cure an ailment by blowing in a patient's ear or burying things at midnight may seem terribly unscientific to us, but these were accepted modes of treatment in human as well as animal medicine for centuries.

The first efforts toward the establishment of United States schools were made by two groups--one in Boston and one in Philadelphia--whose members were a mix of foreign-trained veterinary graduates and forward-minded American practitioners. Their efforts resulted in the establishment of two schools--the Veterinary College of Philadelphia in 1852 and the Boston Veterinary Institute in 1854. Of the numerous schools subsequently established, most developed in association with land grant agricultural universities or were proprietary schools. Thirty-two schools of veterinary medicine opened and closed between 1852 and 1947 including both of the original Philadelphia and Boston schools and all of the proprietary schools. One of the most significant, still extant schools founded (1884) is the University of Pennsylvania since it developed out of a medical school rather than an agricultural program as did the others.

Federal Involvement in Veterinary Medicine

The federal government has always been a major employer of veterinarians. Historically there have always been veterinarians or their precursors attending the animals required by armies--horses, mules, oxen, and cattle. In recent eras, as the beasts of burden have diminished in importance, the functions of the military veterinarian have increasingly shifted to meat inspection, research and laboratory animal medicine. There were nearly 800 military veterinarians in 1970. While this represented only 3% of the active veterinarians, of greater significance to the profession was the entrance of the government into regulating veterinary medicine in the 1880s. The (then) United States Veterinary Medical Association (USVMA) petitioned Congress to establish a Veterinarian Sanitary Bureau as early as 1879 due to the plagues and epizootics (animal plagues) following the Civil War. At the time, for example, cattle driven north from Texas spread Texas Fever to all herds in their wake, and tuberculosis, the primary cause of human death, was spread by infected beef and milk. The Bureau of Animal Industry (BAI) was finally established under the aegis of the US Department of Agriculture in 1884 but only after much debate and drastic budget-cutting. Despite its lack of resources, the small new agency (staff of 20 veterinarians) headed by Dr. D. E. Salmon made medical and public health history in the early years of the BAI. In their discovery of the transmission of Texas Fever by ticks, they were the first to prove the relationship of host insects to disease (paving the way for advances in human medicine through discoveries such as the relationship between malaria and the mosquito). The BAI, through such radical means as the slaughter of infected herds (and against much hostile opposition) began to bring some diseases under control so that they are now rare occurrences rather than the epidemics they once were. The federal meat inspection law was passed in 1890, and veterinarians were engaged to inspect meat animals (before and after slaughter) to protect the public from the sale and consumption of diseased meat.

The work of the BAI to control (either by eradication or cure) the approximately 200 known diseases which are transmissible from animals to man, and the many more which continue to cripple the food animal industry (10-20% losses per year as of 1970) continued into the 1950s. The work of the Bureau is now conducted largely by the USDA's Agricultural Research Service and the Consumer and Marketing Service.

Non-Federal Regulation of the Profession

One of the major steps in the establishment of a profession is gaining the right of self-regulation and the right to exclude "quacks, cranks and hobbiests"--and in veterinary medicine--part-time blacksmiths. The power to guarantee that the right to practice veterinary medicine be granted solely to practitioners whose expertise is acknowledged by his/her peers required legislative action. The first state licensing board was set up and practice regulations outlined by the State of New York in 1884 as a response to pressure by local practitioners. This push toward self-regulation of the profession occurred in approximately the same period that several other of the MODVOPPP professions were seeking state licensure. Podiatry's first state board, for example, was set up in New York 11 years later in 1895.

Relationship to Other Professions

Because veterinary medicine has a clearly defined, non-human patient population, there are no practice conflicts with other health professions like those which optometry encounters with the medical specialty of opthalmology or podiatry encounters with orthopedic surgeons. The University of Pennsylvania was the first veterinary program to develop in association with a medical school. Presently five more schools (California, Michigan State, Minnesota, Missouri, and Ohio State) are in universities with schools of medicine. The association with medical schools has grown out of, and has fostered, an increase in health-related joint research and is encouraged by the profession.

HISTORY OF WOMEN IN THE PROFESSION

Levels of Participation

The first mention of women in the profession is the enrollment of four women at McKillip College in 1915. Other schools did not admit women students until some years later--for example, Michigan State's first woman graduated in 1933. The number of women graduates has increased slowly over the years. In 1960, women constituted 2% (1.82%) (21) and increased to 5% (5.10%) (12) in 1970. The greatest increase has occurred in recent years as shown by the first-year enrollment data in Table 2.

TABLE 2

NUMBER AND PERCENT OF STUDENT FIRST-YEAR ENROLLMENTS, BY SEX

FIRST YEAR ENROLLMENT	TOTAL	MALE	FEMALE	PERCENT FEMALE
1967-68:[a]	1,262	1,161	101	8.0
1968-69:[b]	1,327	1,207	120	9.0
1969-70:[b]	1,341	1,195	146	10.9
1970-71:[b]	1,430	1,286	144	10.1
1971-72:[b]	1,453	1,231	222	15.3
1972-73:[b]	1,580	1,295	285	18.0
1973-74:[a]	1,594	1,230	364	22.8
1974-75:[a]	1,669	1,262	407	24.4

SOURCE:

[a] *Data sheet from the American Veterinary Medical Association.*

[b] *Minorities and Women in the Health Fields, Bureau of Health Resources Development, Health Resources Administration, Public Health Service, DHEW, 1974, p. 35.*

The increase of first-year enrollments of women in veterinary medicine has brought the profession up to the second highest in female enrollment of the MODVOPPP professions. Veterinary medicine passed medicine in 1969-70 in female first-year enrollments, and is now only exceeded by pharmacy and public health (see Table 3).

The increased numbers of women enrolling in veterinary medicine programs is reflected in total enrollments (see Table 4) and the number of women graduates (see Table 5). Again, veterinary medicine is behind only pharmacy and public health in the percentages of women enrolled and graduating, and it is increasing at a faster rate.

TABLE 3

FIRST YEAR FEMALE ENROLLMENTS IN MODVOPPP HEALTH PROFESSIONS SCHOOLS AS AVAILABLE FOR ACADEMIC YEARS 1968-69 THROUGH 1974-75

(BY PERCENT)

PERCENT WOMEN FIRST YEAR ENROLLMENT	MEDICINE	OSTEOPATHIC MEDICINE	DENTISTRY	VETERINARY MEDICINE	OPTOMETRY[a]	PODIATRY[b]	PHARMACY	PUBLIC HEALTH
1968-69	9.0%	4.0	0.9	9.0	-	-	20.1	N/A
1969-70	9.1%	2.4	1.3	10.9	2.5	-	22.7	N/A
1970-71	11.1%	2.7	2.1	10.1	3.7	2.5	23.7	N/A
1971-72	13.7%	4.3	3.1	15.3	5.3	2.0	25.8	N/A
1972-73	16.8%	6.9[c]	4.2	18.0	7.9	2.3	27.7	N/A
1973-74	19.7%	9.0	7.2	22.8[d]	11.3	4.0	29.0[e]	N/A
1974-75	22.2%[f]	10.9[f]	11.2[f]	24.4[d]	-	4.8	-	47.0[g]

SOURCE: Minorities and Women in the Health Fields, Bureau of Health Resources Development, Health Resources Administration, Public Health Service and Department of Health, Education and Welfare, 1974 except:

[a] Unpublished statistical tables from the American Optometric Association, St. Louis, Missouri.

[b] Unpublished data from the American Association of Colleges of Podiatric Medicine, Washington, D.C.

[c] Journal of the American Osteopathic Association, Education Annual, 1974.

[d] Unpublished data from the American Veterinary Medical Association Association, Chicago, Illinois.

[e] American Journal of Pharmaceutical Education, "Report on Enrollment in Schools and Colleges of Pharmacy, First Semester, Term or Quarter, 1973-74", 1974.

[f] Women in Health Careers: Status of Women in Health Careers in the United States and Other Selected Countries, Chart Book for International Conference on Women in Health, The American Public Health Association, 1975.

[g] Association of Schools of Public Health; estimate since some unknown; excludes Puerto Rico

TABLE 4

PERCENT WOMEN TOTAL ENROLLMENT IN SCHOOLS OF VETERINARY MEDICINE

YEAR	MEDICINE	OSTEOPATHIC MEDICINE	DENTISTRY	VETERINARY MEDICINE	OPTOMETRY	PODIATRY	PHARMACY	PUBLIC HEALTH
1968-69	8.8%	2.8	1.1	7.6	-	-	18.2	N/A
1969-70	9.0%	3.0	1.1	8.8	2.9	0.9	20.8	N/A
1970-71	9.6%	2.8	1.4	9.3	2.9	1.4	21.9	N/A
1971-72	10.8%	3.4	1.9	11.5	3.6	1.3	24.9	N/A
1972-73	12.8%	4.5	2.8	13.6	5.1	1.5	26.5	N/A
1973-74	15.4%	6.5[a]	4.3	17.6	7.3[a]	2.4	28.3[a]	N/A
1974-75	18.0%[a]	8.5[a]	6.8[a]	20.3[a]	9.4[a]	3.2[a]	-	45.8[b,c]

SOURCE: Minorities and Women in the Health Fields, Bureau of Health Resources Development, Health Resources Administration, Public Health Service and the Department of Health, Education and Welfare, 1974, except:

[a] *Women in Health Careers: Status of Women in Health Careers in the United States and Other Selected Countries, Chart Book for International Conference on Women in Health, The American Public Health Association, 1975.*

[b] *Masters and Doctors degrees combined*

[c] *Associations of Schools of Public Health, DPH or DrPH; excludes University of Puerto Rico.*

TABLE 5

PERCENT WOMEN GRADUATES FROM SCHOOLS OF VETERINARY MEDICINE

	MEDICINE	OSTEOPATHIC MEDICINE[e]	DENTISTRY	VETERINARY MEDICINE	OPTOMETRY	PODIATRY	PHARMACY	PUBLIC HEALTH
1968-69	7.5%	1.8	--	5.6	1.1	--	16.3	33.8[b]
1969-70	8.4%	2.7	--	7.5	5.2	1.2	18.1	35.3[b]
1970-71	9.2%	2.3	1.2[d]	7.4	2.3	2.0	20.1	36.7[b]
1971-72	8.9%	3.9	1.0	8.7	2.6	0.4	22.6	39.4[b]
1972-73	8.9%	2.1	1.5	10.1	2.5	0.4	24.2	--
1973-74	11.1%	3.4	2.0[a]	10.4	4.3	1.3	26.1[a]	--
1974-75	--	6.5%	3.0[f]	14.2[a]	4.4[a]	1.1[a]	--	42.2[c]

SOURCE: *Minorities and Women in the Health Fields, Bureau of Health Resources Development, Health Resources Administration, Public Health Service, Department of Health, Education and Welfare, except:*

[a] *Women in Health Careers: Status of Women in Health Careers in the United States and Other Selected Countries, Chart Book for International Conference on Women in Health, The American Public Health Association, 1975.*

[b] *Masters and Doctors degrees combined.*

[c] *Associations of Schools of Public Health, DPH or DrPH; excludes University of Puerto Rico.*

[d] *Earned Degrees Conferred*

[e] *Unpublished data from the American Osteopathic Association*

[f] *Unpublished data from the American Dental Association*

Type and Extent of Participation

While a broad variety of practice options are open to the veterinary graduate, women concentrate overwhelmingly in small animal practices (52%) and mixed practices (an additional 22%) as Table 6 demonstrates.

TABLE 6

WOMEN VETERINARIANS: NUMBER AND PERCENT BY PROFESSIONAL ACTIVITY: 1974

	NUMBER	PERCENT
SELF-EMPLOYED		
Mixed practice	296	21.9
Small animal practice	707	52.3
Large animal practice	16	1.2
Other specialized practices	41	3.0
TOTAL SELF-EMPLOYED	1,060	78.4
GOVERNMENT, TEACHING OR OTHER INSTITUTIONAL EMPLOYERS		
Veterinary public health	7	0.5
Regulatory veterinary medicine	24	1.8
Military veterinary service	8	0.6
Other institutional employers	139	10.3
TOTAL INSTITUTIONAL EMPLOYERS	178	13.2
OTHER	114	8.4
GRAND TOTAL	1,352	100.0

SOURCE: Data sheet from American Veterinary Medical Association.

Directly comparable figures are not available on the employment of male practitioners by self or institutional employers. However, 1970 data from the AVMA directory (6) indicates that men are more inclined to enter large animal practice (6.4%) and mixed practices (33.6%) but about half as likely to concentrate on small animal work (26.2%). An important difference in men's and women's institutional employment is the greater likelihood of males finding employment in public health (1.7%), regulatory veterinary medicine (6.6%), and military veterinary medicine (3.8%). A total of 12.1% of all male veterinarians are employed in these public positions compared to 2.9% of the women practitioners.

In a follow-up study of men and women graduates of Michigan State University, striking differences are noted between men's and women's choices of specialty (Table 7). The earliest women graduates (1939-52) concentrated in small animal medicine (33%). A significant number of these graduates (38%) indicated that they were not in active practice at the time of the survey, but the group as a whole spent 78% of the total time in active practice (16:26). More recent graduates (1953-65) overwhelmingly entered small animal practices (66%), but significant increases occurred in mixed practice (doubled) and research and teaching (nearly tripled).

TABLE 7

PRESENT POSITION OF MICHIGAN STATE UNIVERSITY VETERINARY GRADUATES: 1939-52 AND 1953-65 (BY SEX AND BY PERCENT)

	Percentage in Each Specialty			
	Women		Men	
Type of Practice	1939-52	1953-65	1939-52	1953-65
Large animal (including equine)	0	0	4	7
Small animal	33	66	25	35
Mixed (large & small animal)	5	10	31	28
Regulatory veterinary medicine	5	3	10	7
Research and Teaching	5	14	9	8
Management, Sales & Service	0	0	4	2
Labortory animal	9	0	1	1
Other (Specific type of specialty)	0	3	13	13
Retired	0	0	1	0
Employed outside veterinary profession	0	0	1	1
Not practicing at present	38	3	0	0
No response	5	0	1	1

SOURCE: Betty Giuliani, "Women Veterinary Graduates--College of Veterinary Medicine. A Follow-up Study," Office of Institutional Research, Michigan State University, East Lansing, Michigan, 1965, p. 973.

Similar practice preferences are shown in a 1968 study of California women graduates by Dr. D.E. Jasper (Table 8). Over half of the women graduates (19 of 31) selected small animal work. A surprisingly large number of women respondents in our study expressed plans to enter large animal practice and explained that while size and physical strength are factors in large animal work, skill in animal handling techniques and modern technology makes it possible for more women to consider large animal work. Until recently women veterinarians were not accepted for military or federal regulatory veterinary service, which seriously limited the number and variety of practice options open to women.

TABLE 8
ACTIVITY OF WOMEN DOCTORS OF VETERINARY MEDICINE GRADUATES FROM THE UNIVERSITY OF CALIFORNIA AT DAVIS: 1968

Activity		Full-time	Part-time	Number Married	Number Single
Small Animal Practice (Employed)		12	3	13	2
Own Small Animal Hospital		4		1	3
Large Animal Practice (Employed)		1		0	1
Own Large Animal Practice		1		0	1
Own Mixed Practice		2		0	2
Research		1	1	2	0
Peace Corps		1		1	0
Wife and Mother		1		1	0
Unknown	(4)			3	1
TOTAL	4	23	4	21	10
			N=31		N=31

SOURCE: Jasper, D.E., "Our Women Graduates," California Veterinarian, 1968.

The tendency of women graduates to work in small animal practices in part reflects the current trend toward urban and suburban pet practice and away from rural food animal medicine. This trend toward urban practice may also be a factor in the increased interest of women in the profession and in the consequent rise in women enrolled in schools. The rural/urban distribution of men and women practitioners is quite similar, with a slightly higher percentage of men in non-urban practice (see Table 9).

TABLE 9

NUMBER AND PERCENT OF URBAN AND RURAL PRACTITIONERS, BY SEX: 1970

	MALE	PERCENT	FEMALE	PERCENT
Urban	11,848	64%	676	69%
Rural, Non Farm	3,608	30%	270	27%
Rural, Farm	994	5%	39	4%

SOURCE: Veterinary Manpower Information System, DHEW, Health Resources Administration, pages 2-46.

III. THE PROFESSION TODAY

CHARACTERISTICS OF THE PROFESSION

The Profession and Its Social Image

The public image of veterinary medicine has been, for many years, an extremely masculine one--rough, dirty, demanding, occasionally dangerous--with personal characteristics of the practitioner such as physical strength and common sense seen to be as necessary as intellectual abilities or scientific training. A male administrator, describing his educational experience said that in the mid-thirties, vets could get jobs but were called "stinking vets" and that "women wouldn't go to vet parties". People considered the men vet students "oddballs" but apparently the women students were thought to be downright crazy.

The traditional practitioner has been the individual vet running his own business, taking night calls, dealing with a wide variety of species, and frequently out of doors in terrible weather. A male administrator summed it up this way:

> *Veterinary medicine isn't very decorous. There used to be fewer people in the profession because of lack of interest--Why not be an MD when you get into it?*

The reality of veterinary medicine is changing considerably. There are fewer individual private practices and more work is done on small animals in nice clean clinics. However, large animal work retains its image as hard, physical, masculine work:

> *A lot of people feel that you lose your feminine image by going out and wrestling around with the cows and the horses and getting dirty and even people in the school think that it requires physical strength that women don't have and aren't going to be able to handle. Either you flirt around and get somebody to help or if you go ahead and do it yourself then right away you've lost your feminine image. You know, 'who wants to take this hard chick out?' (Group interview, mixed years, female)*

Another important source of image change comes from outside the profession. As noted by a male administrator, the "back-to-the-earth movement" has idealized the rural, ecologically-oriented life and has, in turn, shed a more glamorous light on "stinking vets." The new standing of veterinary medicine as a profession is reflected in the following remark from a male administrator:

> *There are no status differences in professions--particularly in this part of the country. If a man conducts himself professionally, he will be well respected.*

In our visit with staff of the American Veterinary Medical Association (AVMA), it was also made quite clear to us that status differentiations are not a significant feature of the profession. Medicine, for example, has an elaborate hierarchy of specialties, but when asked if a similar ranking occurred in veterinary medicine, and if so, what were the top specialties, the AVMA staff had difficulty addressing the question as one relevant to the profession. After some discussion among themselves, the staff concluded that the question was, in fact, rather inapplicable in veterinary medicine.

Practice Options, Settings, Operations

Veterinary medicine offers a broad scope of practice modes and specialties. The traditional practice mode has been that of individual private practice or possibly partnerships. However, recent tight money conditions limiting the amount and frequency of loans have encouraged the development of group practices and clinics. In addition veterinarians are employed by a variety of governmental agencies and institutions such as the military, public health service, universities, and state agricultural extension programs. Current specialty options include:

- Food animal practice
- Companion animal practice (including equine)
- Laboratory animal medicine
- Zoo animal practice
- Wildlife animal practice
- Public Health
- Military veterinary medicine
- Regulatory veterinary medicine
- Meat inspection

- Industrial veterinary medicine
- Teaching and research

Interest in companion animal practices (large animal, small animal, mixed and species-specific) has increased dramatically in recent years and is reflected in an upswing in urban practice locations. There is a concomitant drop in other specialty areas such as military veterinary medicine.

With the shifts in practice modes have come changes in the social structure of the profession. The practitioner has become less isolated either working with other vets and/or researchers in other professions, or simply keeping lines of communication open to stay up on advances in techniques, drugs,and techniques. The image of the professional has not kept pace with the rapid expansion of practice opportunities. One male administrator commented:

> *Students put you at the bottom of the list of specialties,--teachers, researchers, workers for the feds--90% want to practice (because that's all they've seen or know); 50-60% are now in practice; it used to be much more.*

The increase of practice options along with the image changes and large numbers of applicants has helped to give the profession a very marked sense of regeneration and new growth. Some of that excitement comes across as a male faculty member recites a list of practice varieties.

> *In other words we can talk about laboratory animals, research, health management, that type of thing, small animal practice, large animal practice, or it may be both large and small, zoo animal practice or just a general research program, public health, meat inspection--every so often you hear about this, but there's a lot of things that really are inspected--one of the real demands that the federal government has is that meat must be inspected meat and they can't find anybody to inspect it--exchange programs with underdeveloped nations to study zoonoses, which is another word for diseases that affect man and animals. These are some of the major areas and what it does is serve to emphasize that these people will go through an intense cell biology training program and they will also be able to treat a large variety of animals and in doing this they have the ability to practice, teach or do research. So this is one of the things that makes it sort of different and why there is such a demand. It's increasing as far as the use of the human drugs comes into play. All of these drugs have to be tested out on animals and this is where a lot of individuals receive advanced*

> *training; veterinary toxicologists have to be utilized. So these are areas in the future where veterinarians could play an important role. And I guess the important thing is to realize that every one of those I mentioned with the exception of maybe that large animal practice could easily be done by male or female.*

Currently there are not enough active practitioners to fill even the private practice needs of the country much less the less inviting prospects such as meat inspection:

> *Oh yes, the number of veterinarians needed is astounding. Right now most of the veterinarians are like physicians--they tend to go to the large metropolitan areas. There are many counties in this state that have no veterinary services, but they tend to be the more rural type. It's the same thing you have in the human field, and the reason for it is the difficulty in making a living. You can work three or four days a week in the city versus 6½ days a week up in the mountains. People just take the easy way out. (Administrator, male)*

As an additional incentive for urban practice, meat production in this country has moved from the small farm to enormous ranches which has had an effect in changing the nature of rural practice. Some vets cover large territories, others work for ranches, some specialize in feed-lot medicine. As the proportion of rural practices have dwindled, the increasing companion animal (pets, including many backyard horses) populations have created a demand for urban/suburban practices. Since small animal or equine work is the specialty choice of many women veterinarians, there are sufficient work opportunities for women to participate in veterinary medicine even though they are not yet generally accepted in rural, large animal work, and therefore are not involved in the more financially rewarding aspects of rural practice.

CURRENT TRENDS AND ISSUES

Most of the changes occurring in veterinary medicine have been described in preceding sections. We want to review them briefly here to note their implications for women in training or practice in the profession and for the increased receptivity of the profession to women. The aggregate of these changes may account, to some degree, for the sudden, sharp rise in women applicants in recent years.

Image

The present image of the urban, clinic-oriented practitioner combined with current romantic notions about working with animals has lessened the extreme "masculine" image of the profession. This allows a woman to do the work without risking total loss of her femininity in the eyes of other people (taking into account that our ideas of what constitutes appropriate women's work and roles are changing too. A male faculty member stated "Women in veterinary medicine used to be unfeminine, but that's no longer true," which we take to mean that women are no longer considered to be unfeminine for doing the work and need not give up their self-image as a feminine woman in order to dedicate themselves to the profession.

Other Changes

The nature of general practice work has not changed although it has been eased somewhat by new technology, practice surroundings, and so on. Our societal ideas about the work have changed, and doing physical, outdoor work is seen as less demeaning than it once was. New specialty areas like laboratory animal work now offer a new set of tasks in a new setting. These changes have helped to open the field to women.

Historical data on practice patterns are not available. However, a male administrator estimated that fewer graduates move directly (if at all) into private practice than they once did and noted that:

> *The profession is changing--more opportunities in small animals, research, teaching. Years ago the major percent of grads went into farm practice.*

The primary impact of this shift for women is that working hours have become more manageable, a practitioner need not be self-employed, and a practitioner has more mobility. These factors are helpful in allowing young women to combine full-time or part-time practice with raising a family without forcing her to choose one over the other. Small animal work can be conducted in an urban setting where population densities (human and animal) make it easier to make a living:

> *A pet practitioner gets a better income--rural practitioners get into sidelines like feed lots. (Administrator, male)*

"Sidelines like feed lots" is an important issue here. Feed lots can be extremely lucrative, and the AVMA staff suggested that male veterinarians who are not practicing have often gone into feed lot ownership or management. Because of the rural, large-animal nature of these enterprises, women are largely excluded from feed lot work. The constraints on women's practice choices will be discussed at length in a later section, but it is important to note here that the dramatic changes in women's roles occurring in the urban areas of this country are slow in coming to the more rural agricultural areas. Women students discussed the conservatism and money-orientation of potential rural, large animal vets in their class:

> *They come from farm backgrounds. It's true. A lot of people who are going in for large animal practices have come from families that have--at least in my experience, and especially since I'm in a group with someone that's just driving me crazy--very conservative backgrounds, a large animal vocation in the family and they've been raised in such a way that they knew that they were going to be veterinarians and they knew they were going to go into large animal practice. And their whole outlook on large animal practice is to make money and not really to practice a lot of medicine but to satisfy ranchers, farmers and so forth and to use their strength and their education in that way. (Group interview, mixed years, female)*

Veterinary medicine does not have a strong auxiliary or allied health component like some of other MODVOPPP professions such as medicine or dentistry. Veterinary medical technology is still in the early, tentative stages of development as a recognized health field. A few AVMA accredited auxiliary training programs exist in two-year colleges, but most technicians in the country are trained on-the-job. Technicians and other assistants (usually pre-vet or vet students working for experience) can save the veterinarian time and energy, but they have not made significant changes in the profession. The acceptance of the use of technicians or assistants is useful for women who plan to work in specialties which require considerable physical strength, such as pulling calves (assisting at difficult births such as breech presentations). Since it is now acceptable to hire help when you need it, there is less stigma attached to women's relatively lesser physical strength.

On the other hand, veterinary medicine is as sophisiticated as human medicine in the uses of new drugs and equipment. Expensive or exotic equipment is not within the financial reach of the average practitioner (or client), but is used by research and university training hospitals. Less elaborate equipment now in general use, such as restraints, lifting devices and tranquilizer drugs make it easier to work with large animals and therefore minimizes the strength requirements which have been used to deter women from some practice options. As a male third-year student put it;

> *It's not a matter of strength, but finesse.*

It is our impression from talking to many students, faculty, AVMA staff, and practitioners that most veterinary graduates prefer private practice to many of the other options. The limits of private practice, however, can be frustrating to someone keenly interested in the more sophisticated medical aspects. One male faculty member described his decision to leave private practice:

I *How did you get into the academic end?*

R *I was in practice five years, and decided the pastures looked greener someplace else. I happened to be talking to a man who was a faculty member here about something unrelated to school, but I said I wasn't really happy, and he said, why don't you come back and be a graduate student? There's money in microbiology, so I said it sounded like an interesting thing. We talked about it and decided that we weren't that happy in practice and wanted to try something different, so I went to graduate school and got a PhD here and I'm on the staff.*

I *What is it about practice that was unsatisfactory?*

R *It isn't any one thing. Veterinary practice is, as I say, dictated by economics. If you want to go and look into the depths of things, you're limited. You can only do so much with a dog, cat and horse on a client's money. It isn't like a medical profession which is now backed by insurance companies, to a great extent. So you're always a little bit frustrated. You can only go so far and then you quit. And this frustration tends to build, and you end up with a satisfactory practice from the standpoint of making a living, but you end up doing about the same thing day in and day out, so you begin to look around, like everybody is.*

IV. PROFESSIONAL EDUCATION

CURRENT TRENDS AND ISSUES

There are three primary issues addressed in this section. These issues are: the extremely large applicant pool in veterinary medical schools; the pressures put on the schools by their states; and the modernization of the veterinary curriculum.

Applicants

Veterinary medicine has the highest ratio of applicants to spaces in the first year class of all of the MODVOPPP professions. At the schools we visited, there were respectively nine or eight applicants for each first year enrollment space. The other professions do not display anywhere near as much competition (although one might be led to think so). The only other professions which are under similarly heavy applicant pressure are medicine and dentistry, and both show only approximately three applicants to a single space. Veterinary medicine is so popular that one male faculty member estimated that at least 12% of an incoming class had been accepted at medical schools as well, and turned medicine down in favor of veterinary medicine.

The States and the Schools

Since the vast majority of the schools are public or receive state support, they are vulnerable to influence from state legislatures, which, in turn, is brought about by state practitioners and agricultural interests. One effect of this pressure has been to largely restrict enrollment in the 19 schools to state residents. Some states belong to multi-state educational associations designed to share regional resources (e.g. Western Interstate Commission on Higher Education, Southern Regional Education Board) but even states with such memberships have refused to consider or have strictly limited, the applicants from member states. Applicants from outside states having a veterinary school will not be considered by any schools, and applicants from non-member states with no school are in a poor position to compete. While the establishment of new schools and expanding enrollments at existing schools will relieve some of the pressure, this takes time and there we encountered some defensiveness at the schools about this issue.

> *We feel no obligation to take care of other states. (Administrator, male)*

> *Too many bobtailed, short-term "papered" state residents* [recent "move-ins"] *are taking the places of qualified real state residents. (Administrator, male)*

People who have been in the profession long enough remember another period of growth just after World War II (during the war, many schools quickened the training process--some graduating two classes a year--to meet the sudden demand).

> *So for a long time there was no growth. There were about--I might be a little wrong on the numbers--but say ten or eleven schools by the end of World War II. During the 30s the schools had a hard time finding people who wanted to be veterinarians and go to school. So there were relatively few schools then. Then there was a large amount of growth from the late 1940s to 1950s. And now there is the period of growth happening again, both in new schools and in the number of students that existing schools are taking in. (Clinical faculty, male)*
>
> *We've had for a number of years quite a large number of students who wish to enter veterinary medicine, but the huge number in relation to the places has been a relatively recent thing. Only within the last eight or ten years has there been a large multitude of people who are qualified and want to get into veterinary school in relation to places for them. There was a period immediately after the second World War when a similar thing happened, then there was a period in between when the number of applicants diminished somewhat. (Clinical faculty, male)*

Perhaps the lack of demand both from practitioners and from students during the 1960s accounts for the present limited training facilities. However, current squeeze for entrance creates problems for administrators who are under pressure from alumni and agricultural interests to limit the numbers of women enrolled (on the assumption that women won't practice) but also from the federal government whose funds require non-discrimination in admissions. Women students are aware of the problem and some suggested that schools respond to these dual and conflicting pressures by establishing informal quotas:

> *Just because for the last three years there have been exactly 23 women admitted. It just seems kind of odd. Why not 18 or 28, you know? (Group interview, mixed years, female)*

Curriculum

The traditional veterinary medical program of study is described as:

> Attempts to produce the complete veterinarian, i.e., a graduate with sufficient breadth and depth of knowledge concerning the diseases of animals generally to deliver a diversity of veterinary medicine services with a minimum of postgraduate training or specialization. (20:90)

As a result, most schools offer a fairly rigid program of study with students all taking the same sequence of courses and with little elective credit (if any) available. Generally the first year is entirely pre-clinical basic science courses such as anotomy, physiology, and pathology. In the second year the study of disease agents and disease processes is added to the discipline-oriented courses. In the third and fourth years, students apply this knowledge in the clinical setting. Recently, a diversity of course offerings in new fields of emerging importance such as laboratory animal medicine and genetics are becoming available as electives.

The problems of veterinary education identified by the National Academy of Sciences (20) include:

- Lack of adequate emphasis on professional education as a continuum and on the importance of self-education
- Dearth of effective use of educational technology in the instructional program
- Rigidity of the curriculum

Through the accrediting process, the AVMA now requires that all schools evaluate their existing curriculum on an on-going basis. Curriculum changes are being developed and studies implemented to varying degrees in all schools. Differing responses to perceived needs have produced a variety of new curricula such as the core-elective curriculum or integrated systems curriculum. Both schools we visited had recently (within the past three years) made changes in the curriculum to introduce clinical work earlier and to correlate clinical work more efficiently with academic work. This is the case at many of the schools in the county, and one administrator talked about the revisions, and the high degree of interaction between schools in curriculum review:

> *We haven't been alone in doing that. There have been a number that I could name that have made major revisions in their curriculum, not exactly as we have done, but along similar lines, and we hve been following them, studying what they were doing and they in turn*

> *studied what we were doing in that regard. The changes involved an introduction of a little more clinical material into the curriculum at an earlier time for student interest and for relevance--by and large to allow some opportunity for more electives in the later years in the curriculum because veterinarians do more different things, enter more divergent fields that require special knowledge in each field than was the case a number of years ago. We are trying to change the curriculum to give a general education and then save some time at the end for them to elect special studies of emphasis in the area where they want to pursue their career. This has been the pattern at many schools. Some of them have gone to interdisciplinary instruction and others have kept the basic sciences and taught according to disciplines which is traditional. (Administrator, male)*

THE ORGANIZATION NETWORK

The most significant associations related to veterinary medical education are the American Association of Veterinary Medical Colleges (AAVMC), its Council of Deans, and the American Veterinary Medical Association (AVMA) Council on Education. The AAVMC provides administrators with a forum for educational developments, while the AVMA Council on Education performs the professions's accrediting function (See Appendix C, Associations.).

There are approximately 26,000 active practitioners of veterinary medicine, and only 19 schools at present. That veterinary medicine is not a large profession has profound implications for those who seek to enter or are part of it. Much of the communication within the profession is informal as in the school's observing each other's experiences with curriculum revisions. Most school administrators and faculty are well acquainted with their counterparts around the country through long associations and through training or working at institutions other than their present position. These ties of friendship, mutual interests and/or professional respect become particularly important in areas where there is no formal organizational structure such as in intern and residency placement.

The Veterinary Aptitude Test (VAT) is administered by the Psychological Corporation in New York, but was developed in conjunction with the AVMA and AAVMC. The test is not widely used, however, and not every year by those schools who do use it. "It depends on who's on the committee that year," a male administrator said. The AVMA staff felt that the VAT is not used because schools do not believe that it measures anything useful (or not covered by grade point averages) nor does it predict success in veterinary training. Schools are much more interested in animal experience and sensitivity to animals.

SCHOOLS

There are presently 19 accredited schools of veterinary medicine in the United States, located in 18 states. In addition, it must be noted that the American and Canadian veterinary professions have developed simultaneously in North America, and much cooperation exists between American and Canadian schools. For example, internship and residency positions are routinely open to students from either country. The three Canadian schools are accredited by the AVMA Council on Education and are included in all lists of accredited veterinary colleges (See Appendix D, List of Schools). In addition, a new school is planned for the state of Florida and will enroll its first class in 1977. Connecticut, North Carolina, Tennessee and Wisconsin are reportedly considering establishing new colleges of veterinary medicine. California, due to economic problems, has recently chosen to establish a clinical site in a rural section of the state, to be administered by the existing school at Davis rather than creating an additional school. Virginia plans a new school at Virginia Polytechnic Institute and appointed a dean in 1975. It is clear that the Northeast is especially short on training sites (Cornell only), and the South is well covered.

All but two of the American colleges (Universities of Pennsylvania and Tuskegee) are public institutions, and most are associated with agricultural land-grant universities. Traditionally, veterinary medicine in this country has focused primarily on herd-health (food animals) and public health issues. In recent years, as the field has expanded, increasing interest has been evidenced in research in areas as comparative anatomy and pathology, biomedical research, environmental sciences and more emphasis is being placed on associating with medical schools. The shifts in the locations and types of schools is a microcosm of the development of the profession. Early in the development of the profession in this country, private, independent veterinary colleges were an important source of qualified practitioners. Due to the great costs involved in modern veterinary training, all independent colleges have disappeared and only two private (non-state supported) university affiliated colleges remain, and both of these receive some state funds. All other public schools except Pennsylvania are located on campuses with colleges of agriculture, and six (California, Michigan State, Minnesota, Missouri, Ohio State and Pennsylvania) are in universities with schools of medicine.

In order to be accredited by the AVMA, schools must maintain a veterinary clinic or hospital providing a substantial number and variety of patients for student clinical work. Therefore, each school has its own hospital and those schools associated with medical schools have additional research opportunities. Some notable research sites exist outside of universities with schools of veterinary medicine such as Angell Memorial Hospital for Animals (Massachusetts Humane Society), and at universities with departments of veterinary science or animal pathology. Internship and residency training is available through some of these sites and through private practices as well.

Enrollments (and graduates) have increased steadily. All of the existing schools are under great pressure from applicants, consumers, and states to increase class sizes, and new schools are planned which should further expand the available spaces. There is some worry among educators that there will be too many graduates soon:

> *If every one of five new colleges has a faculty of 60, we'll have 300. Rumors are that in the next five to ten years, we're concerned that there may be too many graduates. (Administrator, male)*

The issue of too many graduates does not appear to worry most school administrators or faculty. The present needs are too pressing and the current supply of practitioners too low for the increase in graduates to have an impact for many years.

THE PROFESSIONAL TRAINING SEQUENCE

Recruitment

Veterinary medical schools are presently overloaded with applicants, and most people involved with veterinary education feel that recruiting would be unfair to both recruitee and the regular applicant. The AVMA and some schools, however, do make some efforts to recruit minority and "disadvantaged" students. Minority recruitment is limited to feeder campuses and inner-city high schools:

> *Everybody is interested in minority enrollment. We want minorities, but these minorities have to be qualified and they have to have an interest. We have a faculty committee, we put on career days, we go to campuses, but due to the number of people applying to our institution, it's really very little. (Administrator, male)*

Women are not considered minorities, and no recruiting is directed toward women:

> *We really don't consider females a minority or disadvantaged group or any thing along those lines. (Clinical faculty, male)*
>
> *We consider whites who have a disadvantaged background in our disadvantaged program. It's not specifically for minorities. If an individual, male or female, has had social or economic problems in the past that influenced their educational progress, then, yes, we do have a special committee that allows us to review these applicants separately for admissions. But that committee determines whether or not they are qualified and then they go into the central pool. (Administrator, male)*

The "disadvantaged" programs are primarily directed toward the inner-city or rural student. Particularly in the rural environment, where changes in women's roles are meeting considerable resistance, these recruiting efforts will probably not reach many potential women students.

Many schools have shifted their focus from recruitment efforts to grooming future applicants:

> *Well, we have increased our public program where we can contact more organizations but we do not go out and say we need more women. Because we have more people applying, men and women, than we can handle as it is. Right now most of our programs are not directed at recruiting. We try to go to organizations like pre-vet clubs in the different universities to give them information as to what classes they should take. (Clinical faculty, male)*

These efforts are directed toward students who have already made a tentative commitment to the profession. By directing efforts only toward the disadvantaged or the already committed, the profession may be overlooking a large group of qualified women who need some encouragement to consider entering a profession with a traditionally male image. High school and college counselors are especially in need of redirection from the profession, since many of them try to discourage women students who express an interest:

> *R^1 My family and everything was all positive about it, but convincing my high school counselor that, one, I was interested in science, yes and, two, I was interested in medicine took me two years and he still doesn't believe it. I went back last year after I was in for two years and he said, 'But I had no idea you were intelligent.'*

> *I mean, he's my counselor, heavens. But I mean the fact that I got accepted and that I'm here and that I was interested in a medical career.*

> R[2] *I've got four brothers and no sisters and I was raised as a boy and I didn't know there was a difference in what we were supposed to do after we grew up. And you know it made a big difference to me because I didn't realize women didn't go into science. So when the counselor told me that I thought he was lying.*

> R[3] *There was a woman counselor for the science professions at my school, and I went to her saying 'Look, my major is in biology, I don't know quite what to do with it. I haven't the confidence really for medical school.' She said, 'Well, don't even think about it.' Maybe she was just trying to be realistic with me, but she said; 'Think about something more practical. How about dental hygiene or physical therapy?' And you know that didn't appeal to me. There was finally a professor who said, 'Get those applications out to vet school.' That was what I wanted, but I didn't believe in myself. If it wasn't for him I wouldn't even have applied. This was a woman telling me to forget it. And other people too. (Group interview, mixed years, female)*

This kind of discouragement from authoritative individuals such as counselors makes it much harder for women to consider the profession. The woman below feels that it weeds out the "half-hearted", but it is difficult to have confidence in yourself when no one else believes in your ability.

> *The discouragement weeds out a lot of women who are half-hearted about it in the first place. A lot of people are so half-hearted about it that all the counselor has to do is say, 'you'll never get in' and they'll say, 'oh, ok,' and they'll give it up. But I think that consequently the number who try are trying harder. (Group interview, mixed years, female)*

Admissions

Most veterinary school catalogues used to state that they did not want women students. Some schools didn't take them at all; other schools took all qualified male applicants before considering women (no matter what their qualifications). Title VII of the 1971 Public Health Act Amendments and Title IX of the 1972 Education Act Amendments made it clear that competitive women applicants may not be discriminated against which, in turn, apparently has encouraged more women to apply. A male faculty member commented on the traditional exclusion of women students:

> *Well, I guess there are several reasons. The reasons seem to be breaking down now and many more women are entering now. Traditionally most veterinary schools have been affiliated or have been on compuses where colleges of agriculture existed, and they felt, I think, that the principle reason for them was to support the health of the major livestock industry. At the present time more of our veterinarians are going into small animal practice, surgery, and those industries. But this has not been the case in the past, and admissions committees selected people with farm background experience and expected that most of the people that graduated would enter that kind of practice which is quite hard physical labor and was more likely to be taken up by men than women. There was discrimination against women in those days in terms of entry and then there was a relative one in terms of what background was expected of the students and how many would have that background as opposed to male students.*

While the reasons for discrimination against women in veterinary school have been breaking down, another male faculty member offered an alternative argument for the increased acceptance of women in veterinary schools:

> *I think maybe the general impetus for most of the veterinary schools in taking higher percentages of women has been health manpower acts and various things, to be sure that federal money could be taken. That seems to be pretty true across all the states. Some of the university institutions are quite conservative in a way. Ours has really not been so I think, and I guess university institutions are considerably more liberal than the profession. So when we were taking more women a few years ago there was criticism of us in the state from practitioners.*

The admissions process is complex, and schools take some shortcuts to try to handle an applicant pool of 800 or 900 for a class of 100. Unlike other professions' schools, the admissions committees at veterinary schools cannot count on numbers of applicants turning them down in favor of other institutions. The first cut through the applications is usually made on the basis of the grade point average (GPA) and required courses to eliminate all non-qualified candidates. The GPA usually is weighted as 40-50% of the applicant's "points" for entrance. Since few schools use the Veterinary Aptitude Test (VAT) and those not consistently, it will not be discussed here as a factor for entrance.

The second most significant factor used to weigh applicants is the extent to which they have had animal experience, preferably through working with a veterinarian to gain a realistic understanding of the demands of the profession. Evidence of animal experience is usually collected through letters of recommendation, the student's statement of purpose and list of extracurricular activities, and through the interview. The interview is also used to assess maturity, dedication to the profession, performance under pressure, and poise.

There seems to be agreement among many faculty and students that women students are academically well qualified. One woman student felt that is perhaps because women experience fewer distractions in pre-vet training:

> *I started out pre-vet,and to a certain extent I think I had an advantage as pre-vet simply because I didn't feel the social pressure to take total responsibility for my life right away. That is, while the guys were out saying, 'I have to be able to work my way through school,' or that there were other distracting pressures besides studying, I would sit there and I could be a little studying machine and I felt that I could concentrate on what I was doing as a pre-vet at that time without too many other outside worries. As a result I could--you know, zing--and the guys aren't able to settle down for some reason. And I don't know if that's accurate or not, but it seems to me like it might be. (Group interview, mixed years, female)*

Another woman suggested that women applicants are more likely to be highly qualified because the half-hearted are weeded out by counselors and other sources of discouragement:

> *I think the women applicants are more qualified because they've gone through the firing line long before they get to apply. They've had to have animal experience, or they've had to go out and work with vets and go through that whole experience, like work with animals and they've had to compete in labs and I think more women get eliminated before it comes time to apply. (Group interview, mixed years, female)*

The issue of gaining animal experience is a knotty one. Since an increasing proportion of applicants come from urban backgrounds, particularly women (Table 13, Chapter V below), the issue of finding a job with a veterinarian, especially in a large animal practice is a severe problem. The schools are aware of this, and are not insistent on large animal or farm experience:

> *Now, work experience can be various categories of which one is farm experience. Now, nobody will say that an individual who doesn't have farm experience won't be included in the class.*

> *That is just one aspect. We take people that have had no large animal experience, no small animal, but they've worked on laboratory animals; or we have individuals who have spent less time in the animal experience because financially or economically it wasn't feasible for them to be in animal experience. That takes time and the pay isn't very good. So all of these factors are brought out in the interview and we tend to have a policy where, yes, they should have a certain exposure degree into animals, particularly in association with a veterinarian if at all possible. Then they get so many numbers of points when an individual says yes this individual qualifies for veterinary medicine and knows what it is about. For those people who spend lots of time they will score higher in that category, and for most of our people this is really a problem. You would be surprised. I would guess that at least half, and this is a guess, that at least half of the girls that apply to our school are very interested in horses. (Clinical faculty, male)*

From the way one male administrator described the situation, it is a wonder that many applicants can find appropriate work at all:

> *Think about it now. We have almost 900 applicants this year. There are people that are stacking up, so there's going to be a large percentage of those people trying to get work the year before they apply. So we have a large population as well as our students who are looking for work, and there are only so many veterinarians in the state. Obviously they are going to take somebody, whether it's female or male, that they are familiar with. And this is one of the complaints that all students have--is that for us just becoming interested in veterinary medicine it is tough to get animal experience with these veterinarians. Most of the time the pay is one of the things that really compromises it. This isn't a unique problem with women. (Administrator, male)*

The schools try to allow flexibility in animal experience. One administrator felt women may have a slight advantage:

> *You know, there are a lot of veterinarians that I know of that run small animal practices that would prefer to have women, because of their work in the hospital, particularly with cats. Cats get along with women better than they do with men. (Administrator, male)*

Another administrator described a woman applicant from an urban background who had no animal experience beyond owning a cat. She described her cat's behavior in such detail that the admissions committee was sufficiently impressed with her acute observations of animal behavior to accept her.

The summary of the admissions process is that women applicants generally are highly qualified academically due to the pre-application screening they encounter and usually manage to collect some animal experience as well. And through the admissions process, a similar proportion of women are in the accepted class as are in the applicant pool. It is possible that this is a reflection of the fine line schools must negotiate between federal non-discrimination compliance and anti-woman pressure from outside groups within the state:

> *Maybe only one-fourth of the applicants are women but maybe 90% of those women, if you were to rank them, are qualified to get in, and yet they're only going to take one-fourth of the class women because only a fourth of the applications come from women, and yet all of those women who applied were more qualified than some of the men that got in. (Group interview, mixed years, female)*

There is one underlying assumption about qualified applicants which has not yet been discussed here, and that is state residency. Many students get around residency requirements by moving to a state where a veterinary schools is located. They must wait until the required six months or other specified time has elapsed before they qualify. There are a few hitches in the state residency requirements which affect women differently than men. In some states if a woman state resident marries an out-of-state man, she loses her official state resident status until he gains residency in the state. Another problem is that young women are often not as mobile as young men, and many families will not allow daughters to move to another state to establish residency. Finally, married women may not have the same mobility as married men since their spouses' professions and careers may make a geographic move difficult.

Pre-Clinical Training

Pre-clinical work (the basic sciences) constitutes 100% of the first two years at some schools and a significant proportion of the curriculum in the first two years at some other schools. Testing in these classes is objective (true/false or multiple choice) and women on the whole do well. There is considerable difference between an undergraduate pre-vet science-oriented curriculum and spending eight hours per day in only science classes. There is also a problem in "never getting to see a live animal--just tissue under a microscope." (Group interview, first year, male and female)

Since entrance is so competitive, most students are academically well-qualified. One first-year male complained, "The class average is about 93 so they test us for what we don't know to get a point spread." The most common cause of attrition in one school visited was the beginning of clinic work in the third year:

> *They get so carried away with finally getting to do what they've been working for all these years that they overdo it--stay up all night--and neglect their academic work (Administrator, female)*

Clinical Training

Formal clinical training is conducted in the university clinics or at off-campus sites such as dairy farms. While students may have part-time or summer jobs with practitioners, the schools do not place students nor evaluate off-campus work. Evaluations of clinical work are necessarily subjective and there is competition among students for learning opportunities. Women students feel that they do not fare as well as the men in the clinical portions of the training process. Negative attitudes towards or doubt of women's ability on the part of clinicians or technicians can prevent some women from participating fully in clinical work. See Chapter V for a full discussion by women students on this issue.

Licensure

Individual practitioners are licensed by State Boards. Reciprocity of licensure exists between a few states with similar practice acts. Examinations are usually held twice a year, and required credentials include a degree from an accredited school (some states require transcripts of grades), sometimes evidence of good moral character, and practice under a licensed veterinarian. Fees for licensure examinations range from $15 (Puerto Rico, Alabama) to $150 (Connecticut). Some states require National Board Examinations which are developed and administered by the National Board of Veterinary Medical Examiners. Although usually taken during professional training, National Boards may be conducted by states requiring passage of the National Board Examination. Fees are usually between $30 and $50.

Internships and Residencies

Internships and residencies are not a required or even expected step prior to practice. Positions for post-graduate specialty training are very limited.

Schools provide most of the slots, but internships and some residencies may be undertaken at research institutes or with private practitioners. There is no formal system of placement equivalent to the matching services in medicine or osteopathic medicine. Individuals within a school will assist students seeking positions, but again there is no formal structure. Informally, letters are sent notifying schools and other interested parties of openings, people telephone each other, and recommendations and interviews are casual. No formal system exists to keep track of or evaluate the available intern and resident training positions. The problem is compound by the fact that training sites range from univeristy veterinary hospitals to private clinics. Women seem to mange to locate and be accepted to post-graduate positions fairly often. We encountered no difficulties in identifying women interns and residents at various sites, and all of them had moved through this informal system which is, at present, entirely male.

The newness of the post-graduate programs is in part responsible for the informality of the system, and the relatively small size of the profession also contributes. Since the system is not formalized and often interlocks with other graduate programs, it becomes quite complex:

> *We do have an internship program and a residency program that we're teaching now, and really, it's in a stage of development. In the teaching hospital, there are a number of people who are employed as clinicians who are recent graduates and in internship programs that involve both medicine and surgery for a one year period of time. Usually this breakdown is either into the large animal field or small animal field. Then beyond that, we have a lesser number of people doing residency programs of either two or three years duration. It becomes more specific in the areas of neurology or opthamology or internal medicine. Then the course work and training program continues also in the more specific areas. We give a certificate rather than a degree at the end of that. This program will be a partial completion of the requirements for the certifying boards that are being established. For one program, comparative pathology, our faculty is largely responsible, although there are faculty from other departments on the campus including the school of medicine as well. We have about 100 students in graduate school, either aiming towards the masters or PhD degree. We have some students in the master of preventative veterinary medicine program which is a professional degree program beyond the DVM teaching people preventative veterinary medicine and epidemiology. Many of*

> *these students come from foreign countries and are sent by foreign governments to be involved with population medicine in their areas when they return. (Clinical faculty, male)*

Certification

Ten specialty boards are recognized to date by the AVMA (See Appendix B, Associations). Boards are evaluated, then recommended by the Council on Education and Executive Board and recognized by a vote of the House of Delegates. All boards require examinations for certification which are conducted by the respective boards. Requirements may include:

- completion of internships or residencies
- x number of years of experience
- additional degrees (other than DVM), and/or
- sponsorship of a diplomate of the specialty involved.

There are very few women among the diplomates (holders of certificates) that are identifiable (some are listed by initials), which reflects the small numbers of women in the profession in previous years.

Job Placement/Start Practice

Schools do not take responsibility for placing students upon graduation. Notices of available positions are posted and listed in journals. Some students with professional colleagues and/or contacts established through summer jobs, may have positions waiting for them. Others have to look long and hard before finding what they want.

One male administrator stated confidently that "All of our graduates get placed," but he did not clarify how, or how he knows. Women students often expressed serious concerns about practice possibility. One of the hindrances is that placement, like everything else, is informal and left largely up to the student. Within the profession getting jobs and getting ahead is dependent on the informal network of veterinarians, many of whom do not welcome women into the profession and will not deal with them once they are there:

> R^1 *And you go to meetings, you come into contact with them in various functions. They don't accept you in the role of*

veterinarian. They don't really want you there. They don't accept you. They would really rather you would disappear, and they're not about to change their ways.

R[3] *I was at a meeting and one guy was very worried about the number of women that were getting into veterinary school and felt that maybe they should talk to congressmen or something to stop this massive influx of women. And he stood up and said: 'I have a woman who works for me and every time a leg comes in to be pinned I have to do it because she's not strong enough.'*

R[3] *One veterinarian I visited before I came to veterinary school said that he wished that I wouldn't get in, because for every woman that got in that was one man that couldn't support his family.*

R[4] *I went to a meeting where only one male in the whole group spoke to me. I tried to speak to several of them and they wouldn't. They would speak amongst themselves, you know, and talk about how terrible it was to have women in the profession... (Group interview, mixed years, female)*

V. STUDENTS

WHAT THE PROFESSION IS LOOKING FOR IN NEW MEMBERS

Desirable Characteristics

Faculty and administrators who deal with the admissions process do not entirely agree on what qualities they look for in applicants, but none would fault the list below:

> *We look for:*
>
> - *maturity*
> - *responsibility*
> - *work done previously*
> - *experience with animals*
> - *leadership ability--curriculum involvement*
> - *diversity of interests*
> - *member of pre-vet club--and if not a member, why not? (Clinical faculty, female)*

Others add the criterion of commitment to the profession:

> *We look for people who know what they're asking for, who want to study for four years to learn something they will do for the rest of their lives. And in five years, ten, 20, 40 years, we want to be able to identify them as a vet from our school. (Administrator, male)*

It is often difficult to define what commitment means beyond working long hours, and some differ on what the profession's commitments are:

> *This is a profession of individuals. It offers independence, an outdoor life. Rugged individualists are one of the strengths of the profession. They want to be in medicine, but are not interested in sick or old people. (Administrator, male)*
>
> *Honesty, integrity, and commitment are looked for. People who will be pillars of society in other ways besides being vets. They should be interested in community activities--give evidence of leadership. Not doing your own thing kind of thing, but community activities, etc. Good veterinary service--we want to add something to the "Let them find out what you want, and have them give it back to you" kind of teaching. I'm proud of the students. They must master the*

> *discipline, then make it applicable to everyday life. (Administrator, male)*

No matter what the long-range goals of this commitment are (to society or to the rugged individual), it must be made on the basis of a concern for animals which grows out of actual experience, not romantic ideas about the work:

> *We have to de-mystify the profession for a person. Compassion for animals has big importance--financial interest is not important and we would discourage that. We ask, 'Why do you want to be a vet?' (Clinical faculty, male)*

We have already discussed the qualifications that women bring to their applications. However, the fact that they are women affects the evaluation of their applications, and is often particularly apparent in the interview process:

> *Men on the selection committee are more lenient on women, more compassionate. (Administrator, male)*

Whether the committee is more lenient is a moot point, since women students at both schools we visited reported being asked what they consider to be unfriendly or inappropriate questions such as:

> [to single woman] *What will your husband think?*
>
> [woman] *What husband?*
> *(Third year student, female)*

The problem with these questions about hypothetical husbands is that they are often impossible to answer. If a woman responds "Well, he's going to have to deal with it", or that she doesn't intend to marry, then she may appear unnatural, unfeminine. On the other hand, if she expresses interest in marriage and a family, then her commitment to the profession may be considered questionable.

How Changes in the Profession Make a Difference

Nearly everyone we interviewed discussed how the profession had changed over the years. With the broadened scope of practice opportunities, the field is now open (and attractice) to a wide variety of people. However, some more traditional areas of veterinary practice are still difficult for women to enter, and women are clearly encouraged to enter the less demanding specialties. The following discussion of practice possibilities for women by four male clinicians illustrates some of the stereotypes which may yet limit women's practice opportunities:

R[1] *The public views the vet as a horse doctor. The profession stands and falls on the image the public has. Some avenues of the profession are not attractive to women. I would not like to see my daughter in a large animal practice. I believe in women's lib, but biologically, it's too hard. Historically, women have participated in teaching, research, small animal practice. No woman is ever seen doing meat inspection; cities' packing houses are not very conducive environments for women, like on the killing floors. They could fit in more logically as more involved with administrative aspects. The profession is changing.*

R[2] *There are more women now. With the development of strong programs in lab animal medicine, women fit in very nicely. The public image has kept women out.*

R[1] *In the last fifteen years, the field has broadened. In the 60s we had to scrape the barrel to fill a class of 70 people. Diversification in the profession has drawn more students, particularly women.*

R[3] *The 'back to earth' and rural areas movement helps make vet medicine more attractive now to young people; many more girls are applying.*

R[1] *Some things are made harder by small size. With the use of drugs it's less important, but physical size may make a difference in decision of where to specialize.*

R[2] *I never look for size as a criterion. (Group interview, clinical faculty, male)*

WHO THE STUDENTS ARE

Demographic Characteristics

A major difficulty encountered in attempting to gather descriptive demographic data on veterinary medical students is that no current data are available. The most recent, fairly comprehensive information available dates back to 1970-71. This five-year lag is problematic since the increase in both the applicant pool and in the numbers of women enrolled in the profession has occured in the last few years. In particular, the trend toward more urban students, for example, may not be adequately reflected in 1970-71 data. However, the data available provides a useful picture of veterinary medical students compared to those in the other MODVOPPP professions.

Table 10 below illustrates that veterinary students are more likely to come from families with lower incomes than in any other of the MODVOPPP professions except pharmacy students. Like other MODVOPPP students, well over half of the veterinary student family incomes were in the $5,000 to $15,000 range in 1970-71, but a greater proportion fell in the under $5,000 category than most other professional students. Proportionately fewer students' families earned over $25,000 per year.

TABLE 10

TOTAL ENROLLMENTS IN SELECTED HEALTH PROFESSIONS SCHOOLS IN THE UNITED STATES BY FAMILY INCOME: ACADEMIC YEAR 1970-71 (BY PERCENT)

Family Income (by percent)	MEDICINE	OSTEOPATHIC MEDICINE	DENTISTRY	VETERINARY MEDICINE	OPTOMETRY	PODIATRY	PHARMACY	PUBLIC HEALTH (not available)
Less than $5,000	6.8	12.4	7.3	11.7	9.8	11.3	16.9	
$5,000 - $9,999	20.1	25.2	22.0	27.9	26.0	24.8	31.6	
$10,000 - $14,999	24.9	27.9	29.8	29.6	28.8	27.7	28.7	
$15,000 - $19,999	14.8	13.5	15.7	13.7	13.7	15.3	12.7	
$20,000 - $24,999	11.5	7.2	11.0	7.7	9.6	10.1	5.3	
$25,000 or more	21.8	13.9	14.3	9.5	12.2	10.8	4.7	

SOURCE: Minorities and Women in the Health Fields, Bureau of Health Resources Development, Health Resources Administration, Public Health Service, Department of Health, Education and Welfare, 1974.

One factor which influences the lower incomes of veterinary students' families is the relatively low proportion of fathers with advanced education. While in 1970-71 veterinary students' fathers' were more likely to hold college degrees than fathers of all other students except dental students, fathers of other

MODVOPPP students except pharmacy were more likely to hold graduate or professional degrees. While 17% of veterinary students' fathers had advanced degrees, medical students fathers' were twice as likely to have advanced degrees (see Table 11).

TABLE 11

DISTRIBUTION OF HEALTH PROFESSIONS STUDENTS BY FATHERS' EDUCATIONAL LEVEL IN 1970 (BY PERCENT)

Approximate % Educational Level	U.S.	MEDICINE	OSTEOPATHIC MEDICINE	DENTISTRY	VETERINARY MEDICINE	OPTOMETRY	PODIATRY	PHARMACY	PUBLIC HEALTH (not avalable)
1) Graduate or Professional	5	35	25	22	17	22	21	11	
2) College Graduate	7	4	12	15	14	10	7	8	
3) Some College	10	14	12	16	15	15	17	15	
4) High School Degree or Less	78	37	50	47	55	52	55	65	

SOURCE: How Health Professions Students Finance Their Education, Department of Health, Education and Welfare publication. Educational level is approximate because numbers were estimated from bar graphs in the source.

Table 12 reveals that in 1970, only 4% of veterinary students' fathers were veterinarians, indicating that veterinary medicine is not one of those professions which is traditionally handed down from preceding generations. In this respect, veterinary medicine is the least family-oriented of all of the MODVOPPP professions. An additonal 4% of the students' fathers were other MODVOPPP professionals, the lowest except for pharmacy. The absence of veterinary students' fathers from the health professions was balanced by the high percentage (21%) of farm occupations, which is not unexpected.

TABLE 12

DISTRIBUTION OF HEALTH PROFESSIONS STUDENTS BY FATHERS' OCCUPATION UNITED STATES: 1970 (BY PERCENT)

Father's Occupation (by percent)	MEDICINE	OSTEOPATHIC MEDICINE	DENTISTRY	VETERINARY MEDICINE	OPTOMETRY	PODIATRY	PHARMACY	PUBLIC HEALTH (not available)	*ALL U.S. EMPLOYED MALES*
1) Profession of Student	15	11	7	4	9	7	7		--
2) Other MODVOPPP Profession Health Worker	6	5	7	4	7	9	3		--
3) Other Professional & Technical Worker & Owner, Manager, Proprietor	48	42	47	39	42	43	31		*28*
4) Clerical & Sales	12	13	13	11	14	15	15		*13*
5) Craftsman, Skilled Worker	10	16	16	15	16	16	24		*21*
6) Unskilled Worker	5	8	6	6	7	7	11		*26*
7) Farmer, Farm Worker	3	4	3	21	4	2	8		*5*
8) Other Occupations	1	1	1	--	1	1	1		*6*

SOURCE: How Health Professions Students Finance Their Education, Department of Health, Education and Welfare publication Number (Health Resource Administration) 74-13. October, 1973. p. 6.

Another feature which sets veterinary students apart from the other MODVOPPP professional students is the overwhelming preponderance of students from small towns (60%) (Table 13) with a mere 10% from cities of 500,000 or more in 1970. While this data is in keeping with the fathers' occupation data and the nature of the profession, it may not reflect the trend to more urban students since the data is now six years old.

TABLE 13

DISTRIBUTION OF HEALTH PROFESSIONS STUDENTS BY SIZE OF HOMETOWN: 1970
(BY PERCENT)

SIZE OF HOMETOWN	U.S.	MEDICINE	OSTEOPATHIC MEDICINE	DENTISTRY	VETERINARY MEDICINE	OPTOMETRY	PODIATRY	PHARMACY	PUBLIC HEALTH (not available)
1.) 0-24,999 population	55	35	37	42	60	45	30	51	
2.) 25,000-499,999 population	26	42	32	40	30	35	35	32	
3.) 500,000 or more population	18	22	30	18	10	20	35	16	

SOURCE: *How Health Professions Students Finance Their Education, Department of Health, Education, and Welfare Pub. No. (HRA) 74-13, October 1973.*

In 1970-71, veterinary students were approximately in the middle of the MODVOPPP professions on marital status (Table 14). While we were unable to obtain reliable data on the marital status of veterinary medical students by sex, the women among our respondents did seem less likely to be married than the men.

TABLE 14

DISTRIBUTION OF MARRIED STUDENTS IN EACH HEALTH PROFESSION, SCHOOL YEAR 1970-71 (BY PERCENT)

	MEDICINE	OSTEO. MED.	DENTISTRY	VET. MED.	OPTOMETRY	PODIATRY	PHARMACY	PUB. HLTH.
Married Students	47	60	55	49	44	54	31	Not Avail.

SOURCE: *How Health Professions Students Finance Their Education,* DHEW Publication No. (HRA) 74-13, October, 1973, pp. 9 and 11.

Women students discussed the problems of marriage at considerable length. While many women expressed a wish for a supportive partner during their training, the built-in conflicts of training and women's roles also seem to interfere and children further complicate life:

> *I got married at 20; my mother was worried that I wouldn't complete college; then I went to vet school, and then she was worried that I wouldn't stop! She wants me to be a good wife and support him. (Third year student, female)*
>
> *Yes. Well, being married just in vet school made it easier because I could go home--except for the fact that I had to cook the dinner and keep the house and all that junk--my home life was stable which is probably why I made it through. And if I'd been single and had to worry about dating and things like that, that would have been a hassle. And so I think that it was to my advantage to be married. When it came to looking for internships, it became an immediate disadvantage because I couldn't go anywhere. I had to stay here. So I either have to find a job here, or go for a PhD, or get the internship, which seems like a one in a million chance. It's a fantastic opportunity but I feel like I cannot take full advantage of it and I feel like I'm cheating my family, and I'm cheating the school, and I'm cheating myself and I'm exhausted all the time and people go around saying--you look terrible, why don't you take some time off? But I figure I put anywhere from 90 to 100 hours a week in*

> *this hospital. I leave in the dark, I come home in the dark--if I even get to go home at all.*
>
> *I would like to take a whole year and just dedicate it to veterinary medicine--to really get good. And I can't. Every minute I've got that's free from the hospital I want to spend with my family because they're really beginning to resent my leaving them, not being home at night. You get these little vibes, you know, oh do you have to go at night. So it's been hard. (Group interview, mixed years, female)*
>
> *My ex-husband always encouraged me in words, but when it came down to my spending so many hours here...I guess he didn't share my interests as much as I thought he did. (First year student, female)*

Financing Their Education

Because all veterinary schools are public or receive some state support, the average tuition is generally lower than in other MODVOPPP schools. While the lower expenses are slightly offset by lower parental income, veterinary students are less likely to report support by loans (Table 15), and the profession has the lowest percentage of students reporting expenses exceeding income (Table 16) except for medical students. It is important to note that married students are less likely to report a gap between income and expenses. Because women may less often be married and thus would not have a spouse to support them, financing may be a greater problem for them than for men students.

TABLE 15

PROPORTION OF HEALTH PROFESSIONS STUDENTS REPORTING LOANS, SCHOOL YEAR 1970-71 (BY PERCENT)

SOURCES OF LOANS	TOTAL	MEDICINE	OSTEOPATHIC MEDICINE	DENTISTRY	VETERINARY MEDICINE	OPTOMETRY	PODIATRY	PHARMACY	PUBLIC HEALTH
All sources	54 %	54	70	64	52	54	60	43	Not Available

SOURCE: How Health Professions Students Finance Their Education, DHEW Publication No. (HRA) 74-13, October, 1973.

TABLE 16

RELATIONSHIP BETWEEN INCOME AND EXPENSES FOR HEALTH PROFESSIONS STUDENTS
SCHOOL YEAR 1970-71 (BY PERCENT)

EXPENSES EXCEED INCOME	MEDICINE	OSTEOPATHIC MEDICINE	DENTISTRY	VETERINARY MEDICINE	OPTOMETRY	PODIATRY	PHARMACY	PUBLIC HEALTH
1) Total, all students	37	50	44	41	49	50	44	Not Available
2) Total, single students	41	53	50	46	54	57	44	
3) Total, married students (no children)	31	44	36	30	39	43	35	

SOURCE: *How Health Professions Students Finance Their Education,* *DHEW Publication No. (HRA) 74-13, October 1973.*

Table 17 indicates that in 1971, two-thirds of all veterinary students were in debt an average of $3,534. The proportion of freshmen students in debt was quite low relative to other professions (58%), but the disparity dwindled by jumping to 70% in the second year.

Table 18 breaks down the expenses of all MODVOPPP students into component parts, showing veterinary medicine tuition to be lower in 1970-71 than all of the other professions except pharmacy. Other expenses show a similar pattern. Veterinary medical students fell into the middle range on the size of loans they received and were more likely to collect scholarships ranging from $1,000-2,000 than other professional students except for those in dentistry and medicine.

TABLE 17

PROPORTION OF STUDENTS WITH DEBTS IN HEALTH PROFESSIONS SCHOOLS AND AVERAGE AMOUNT OF INDEBTEDNESS

By School Class: June 1971

SCHOOL CLASS	MEDICINE	OSTEOPATHIC MEDICINE	DENTISTRY	VETERINARY MEDICINE	OPTOMETRY	PODIATRY	PHARMACY
All Classes:							
Percent reporting debts	65%	79%	74%	66%	65%	70%	56%
Average debt	$4,289	$5,966	$4,888	$3,534	$3,559	$4,115	$2,477
Freshman:							
Percent reporting debts	61%	72%	66%	58%	57%	60%	52%
Average debt	$2,975	$3,457	$3,162	$2,670	$2,560	$3,119	$1,974
Sophomore:							
Percent reporting debts	62%	79%	73%	70%	67%	70%	58%
Average debt	$3,545	$4,930	$4,149	$3,180	$3,032	$3,691	$2,315
Junior:							
Percent reporting debts	68%	84%	78%	68%	68%	76%	57%
Average debt	$5,194	$6,069	$5,322	$3,851	$3,898	$4,368	$2,650
Senior:							
Percent reporting debts	72%	84%	81%	72%	73%	80%	58%
Average debt	$5,504	$9,796	$6,900	$4,552	$5,047	$5,318	$3,261

SOURCE: How Health Professions Students Finance Their Education, DHEW Publication No. (HRA) 74-13, October, 1973, p. 40.

TABLE 18a

AVERAGE ANNUAL EXPENSES OF HEALTH PROFESSIONS STUDENTS

SCHOOL YEAR: 1970-71

SELECTED EXPENSE ITEMS	MEDICINE	OSTEOPATHIC MEDICINE	DENTISTRY	VETERINARY MEDICINE	OPTOMETRY	PODIATRY	PHARMACY	PUBLIC HEALTH
1) School Expenses (tuition, fees, books, etc.)	$1552	$1770	$1615	$1362	$1458	$1788	$1131	N/A
2) Board & Lodging (maintenance of living quarters)	2219	2420	2306	1863	2038	2575	1531	N/A
3) All Other (taxes, insurance)	1758	2520	2310	1248	1755	1938	1077	N/A
TOTAL	5529	6710	6231	4473	5251	6301	3739	
Rank by Most Costly	*4*	*1*	*3*	*6*	*5*	*2*	*7*	

SOURCE: How Health Professions Students Finance Their Education, Department of Health, Education & Welfare publication number (Health Resources Administration) 74-13, October, 1973, page 10.

TABLE 18b

DISTRIBUTION OF LOANS IN MODVOPPP HEALTH PROFESSIONS SCHOOLS BY AMOUNT OF LOAN AND PROPORTION OF STUDENTS REPORTING LOANS: 1970-71 (BY PERCENT)

PERCENT LOANS	TOTAL	MEDICINE	OSTEOPATHIC MEDICINE	DENTISTRY	VETERINARY MEDICINE	OPTOMETRY	PODIATRY	PHARMACY	PUBLIC HEALTH
Under $1000	51.6%	44.3	62.1	46.2	47.5	46.4	68.9	82.3	N/A
$1001 - $2000	38.1%	42.6	32.1	41.9	43.0	45.7	29.9	15.4	N/A
$2000 +	10.3%	13.1	5.8	11.9	9.5	7.9	1.2	2.3	N/A
Rank Under 1000		*7*	*3*	*6*	*4*	*5*	*2*	*1*	*N/A*
Proportion of Students Receiving from all Sources		54%	70	64	52	54	60	43	N/A

SOURCE: *How Health Professions Students Finance Their Education, Department of Health, Education & Welfare publication number (Health Resources Administration) 74-13, October, 1973.*

TABLE 18c

DISTRIBUTION OF SCHOLARSHIPS IN MODVOPPP HEALTH PROFESSIONS SCHOOLS BY SIZE OF SCHOLARSHIPS: 1971-72 (BY PERCENT)

PERCENT SCHOLARSHIPS	TOTAL	MEDICINE	OSTEOPATHIC MEDICINE	DENTISTRY	VETERINARY MEDICINE	OPTOMETRY	PODIATRY	PHARMA	PUBLIC HEALTH
Under $1000	81.2%	74.5	95.5	82.9	83.4	87.5	87.4	87.9	N/A
$1001 - $2000	15.1%	18.8	4.5	14.8	15.9	11.6	12.0	11.3	N/A
$2000 +	3.7%	6.7	--	2.3	0.7	0.9	0.6	0.8	N/A
Rank Under 1000		*7*	*1*	*6*	*5*	*3*	*4*	*2*	*N/A*
Proportion of Students Receiving from all Sources		59%	60	55	54	52	56	60	N/A

SOURCE: *How Health Professions Students Finance Their Education, Department of Health, Education & Welfare publication number (Health Resources Administration) 74-13, October, 1973.*

While veterinary medical students were the least likely, except for podiatry students, to receive scholarships over $2,000, on the whole they did well on funding sources compared to expenses.

We have already observed that women seem less likely to be married and our few married women respondents were often married to other vet students. Thus they are less likely to receive spousal support. Table 19 makes it clear that women veterinary students were also less likely to receive scholarships and loans than their male counterparts. Throughout our interviews, there was an underlying assumption on the part of many male respondents that women students don't have to work for a living, that someone takes care of them. Information from our women respondents in veterinary medicine suggested that they come from the same income level families as their male peers although their backgrounds are more often urban. Our respondent data also indicates that frequently women who aspire to professional careers do not have the support (financial or emotional) of their families because parents do not approve of their aspirations and want them to "settle down."

TABLE 19

FEMALE ENROLLMENT AND FEMALE RECIPIENTS OF LOANS AND SCHOLARSHIPS IN MODVOPPP HEALTH PROFESSIONS SCHOOLS: 1971-72 (BY PERCENT)

1971-72	TOTAL	MEDICINE	OSTEOPATHIC MEDICINE	DENTISTRY	VETERINARY MEDICINE	OPTOMETRY	PODIATRY	PHARMACY	PUBLIC HEALTH
Women Percent of Total Enrollment[a]	-	10.8	3.4	1.9	11.5	3.6	1.3	24.9	N/A
% Scholarships for Women	13.7	13.1	4.6	2.1	9.9	4.1	3.4	29.2	N/A
% Loans for Women[b]	11.4	12.6	4.3	2.2	11.3	2.9	1.4	26.2	N/A

Total Scholarship Recipients[b]	TOTAL	MEDICINE	OSTEOPATHIC MEDICINE	DENTISTRY	VETERINARY MEDICINE	OPTOMETRY	PODIATRY	PHARMACY	PUBLIC HEALTH
% Women Receiving Scholarships	23.2	23.5	44.7	24.1	20.4	30.6	80.0	22.9	N/A
% Men Receiving Scholarships	22.0	20.0	35.2	24.3	25.0	29.2	27.0	20.2	N/A

Total Loans Recipients[b]	TOTAL	MEDICINE	OSTEOPATHIC MEDICINE	DENTISTRY	VETERINARY MEDICINE	OPTOMETRY	PODIATRY	PHARMACY	PUBLIC HEALTH
% Women Receiving Loans	28.2	38.4	57.6	41.8	30.1	30.6	46.7	18.7	N/A
% Men Receiving Loans	32.8	34.4	49.6	39.2	31.7	41.9	38.5	19.2	N/A

SOURCES: [a] *Women in Health Careers: Status of Women in Health Careers in the United States and Other Selected Countries, Chart Book for International Conference on Women in Health, The American Public Health Association, 1975.*

[b] *Recipients of Health Professions Loans and Scholarships, 1971-72, US DHEW.*

Reasons for Being Attracted to the Profession

Students are generally attracted to the profession because of love of animals or because they say they "enjoy medicine but don't want to work with sick people." Some of the differences between men's and women's attraction to veterinary medicine have been mentioned in preceding sections but will be summarized here. For many students, both male and female, the first contacts with the profession are through pet ownership.

> *They have had pet animals, had good experience with vets. Those seem to be the biggest single factors in students' decisions. (Clinical faculty, male)*

The important difference here is that a large proportion of women students came to the profession through their experiences as horse owners, which may account for the high proportion of our women respondents who said they want to specialize in equine medicine. Many respondents also suggested that cats and women share a greater affinity than cats and men.

Male students, on the other hand, were more likely to see veterinary medicine as a good job, particularly those who were interested in food animal work. Veterinary medicine is seen as an ideal combination of the respectability, challenge, and money-making aspects of a profession combined with outdoor work:

> *I chose veterinary medicine because I wanted a good profession--a daily challenge, not a routine--and a lucrative one, but didn't want to be inside at a desk. I like the outdoors, so veterinary medicine is good. (First-year student, male)*

Routes to the Profession

The men students we interviewed were generally older than the average student, and they had taken time out to do other things prior to their decision to enter veterinary careers. For example, one student we met had served in the Southeast Asia Animal Corps; another had trained as an engineer and spent four years in the Air Force; and a third spent two years in the army in Vietnam. One man had a brother who is a vet, another an uncle. Both received encouragement from the family practitioners. Men generally did not discuss sources of encouragement or discouragement in their career choice.

The women with whom we spoke included both older and younger students. The younger students tended progress straight through school with no break between pre-vet work and entry into the professional program. Older women had taken time out, but their activities seem more directly related to their career choice such as working to gain animal experience or to finance their education. In addition, one woman had acquired an MS degree in Pathology, and another had to wait until she was 21 years old to establish state residency.

Women students received little encouragement from, and were often actively discouraged by official career guidance sources, and only two women respondents mentioned direct encouragement for their career choice from practitioners (one of whom was her grandfather). On the whole, the primary source of encouragement for a woman considering veterinary medicine seems to be her immediate family, particularly fathers. It is unusual for a woman to be expected to develop a career for herself in our society on the assumption that her family/husband will always provide for her. These assumptions are breaking down, however, and one student described why her mother encouraged her to consider a professional career:

> *As a matter of fact, my mother was just plain old hung-up about it. I wasn't only supposed to get a college degree. I had to have security, because my mother had a friend whose husband was an invalid. The women had an AB in English and no work experience for 15 years and she had to go out and try to make a living so my mother said, 'Don't you dare quit school until you have something you can always fall back on.' And with that kind of pressure from the time you're 8 or 9, you're going to be oriented toward some kind of profession by the time you hit college. (Group interview, mixed years, female)*

Among the women we interviewed, however, mothers in general weren't as likely to be as encouraging as the mother above or as fathers. An interesting facet of the women we met in veterinary school is that they frequently had parents who held the same expectations for them as they held for their male siblings. These women related better to their fathers (who shared their aspirations) than their mothers:

> *My mother wouldn't let me around large animals, but my father encouraged me to go to school. I'm his woman-son. A lot of women in vet school are. A lot of women have family push behind them...very proud of them. (Fourth-year student, female)*

Other than family support, women said they encourntered few other sources of encouragement. Friends of one woman student worried about her safety:

> *I've been discouraged by a few friends simply because they think if you go out and wrestle with all these animals you're going to get kicked or hurt pretty bad at one time or another. They say, 'Why don't you take a nice job in a bank or a donut factory so you can stay in one piece?' (Group interview, mixed years, female)*

Women who survive the "pre-screening" of this disapproval and discouragement develop a tough determination. Frequently the anger women experienced as a result of other people's negative attitudes toward their ambitions seemed to give them the energy to persevere:

> *I persevered partly because everyone kept telling me that I couldn't get in because I'm a girl. That made me so angry I just had to show them. It doesn't mean I'm not dedicated; it was a goad. (Third year student, female)*

Assessment of the Profession from the Inside

The students we talked with expressed considerable satisfaction that they are in training to do what they have "always wanted" to do with their lives. They were excited by the clinical work in particular and looked forward to practice:

> *I know myself. I love it and I know how much I'm going to do. As far as I know today, I'm going to work indefinitely. (Fourth-year student, female)*

According to our respondents, the attrition rate for veterinary students is quite low. One reason that students apprently do not drop out is that schools select for students who have a reasonably clear idea of what professional training and practice will involve. Admissions committees are not infallible, however, and there are some problems. Some students enter the field with the expectation of making money:

> *A beginning GP vet makes $15,000--can go up to $40-50,000 with time and practice. (First year student, male)*

While some veterinarians may earn a lot of money in practice, the profession is clearly not as lucrative on the whole as other professions such as medicine or dentistry:

> *The person that is more economically oriented is going to say, 'Hey, I should be in medicine because I can make a lot more money.' I will give you some feeling I have. For those people that like to condition themselves as business people, they utilize their veterinary medicine as a base to generate funds so that they can become land owners, managers, and this kind of thing, then they have a great feeling of frustration. With our students, particularly in the recent years, this isn't so much a problem because it's amazing that most of these kids aren't interested in how much money they make now. After they're out who knows what will happen. Now they come in with the idea of how can I help, what can I do, what accomplishment can I make. (Administrator, male)*

The students' idealism can create another kind of problem for them. The story below illustrates both the humanistic concerns many students have and the compassion and relevance which vitalizes much of the profession. A woman student asked a faculty member how, in good conscience, she could charge $200 for a surgical procedure on a dog when she knows that there are people who are going hungry. He told us that he responded to her questions as follows:

> *There are people who will come in and $200 is nothing. They want their animal treated. There are others that come in and $200 is a mountain of money. But if she is in practice, that individual has the ability to govern how much you're going to charge for it. We'll do it for $20, or we'll do it for $50 or whatever it is.*
>
> *When I was in Illinois we had one old lady come in. She brought her dog and it needed a procedure done. Now the veterinarian saw her, saw the dog, knew what the situation was, he knew how much that dog meant to her and he did it for nothing. That lady really got put out. She wasn't going to be a charity case. She just read him out, 'I don't take charity in this situation. I'm going to pay you, it's just that I can't pay you very much.' 'Alright, how much can you pay?' 'I can give you 50¢ a week.' 'OK, you pay me 50¢ a week.' That lady paid him 50¢ a week until that bill was paid out. It was a big bill. But the point is, you see, he started telling the value and so forth of the procedure. But that won't be her job. Her job is to be able to tell what is wrong with the patient, the animal, recommend what should be done, give the options to the individual, and if it's an economic*

> *thing, she will then be in a position to actually do something.*
>
> *We see people coming in all the time--you talk about mental health in humans, having a relationship--you should see some of these people--that animal is worth more to them than a lot of people's children are to them. You have to appreciate that you are not in a position to place values on such as that. The point is, where an individual is concerned about people going hungry then she can generate a good job, she can make her money and she can give it to all the organizations. I told her if she was worried about somebody in Peru going hungry and starving to death, then what she can do is make herself $30,000 a year and give $10,000 of it to the church and they'll go down there and take care of some of those people. But if she quits and does not have the ability to generate those kinds of funds, she's not going to help anybody, is she? That's just one example in this area. We could write a book on these things. I don't know that I have all the answers, but you know. we kind of try to help somebody if we can. But it is not unique to girls. Males come in with the same things. So a lot of our people, particularly in this day and age, aren't that concerned about money. The older generation will be the ones that are concerned, particularly those of the vintage that went through the depression. Most of us have lived in good times so all we want is to have enough to eat. (Clinical faculty, male)*

Another source of student dissatisfaction which is more common is the intensity of the training years. These students have survived a highly competitive pre-veterinary curriculum and admissions process. The rigor of the veterinary curriculum does not give them much chance to feel comfortable, however, and the caliber of the competition has increased:

> *The younger individuals--for example, the male that dropped out--he says, 'Hey, man, there's too many things happening in this world. You send me to school, you start me out in this program, and I'm in class at 8:00 and I finish at 5:00 in the evening. I go home, have something to eat, and I'm expected to put in four to five hours that night. If I start at 7:00 and go until 11 or 12, that doesn't leave a whole lot of time, and if I don't work on the weekend to keep things going, then I'm not really right at the top of the class.' So what we're doing is putting highly competitive individuals together. The point is, these people went into classes where there were 50-100 people, they were used to competing and doing well because there was full scale competition there. Now we have taken the top individuals and put them all*

> *together, and it gets frustrating, you see, because here you are putting in every effort you can and unlike your record of four years or so, now you may be at the middle or near the bottom of your class. It doesn't sound like much but there are real psychological complications involved in this. (Administrator, male)*

Women students reported that male students may belittle the women's academic excellence:

> *I think most of my classmates feel that girls are sort of smarter. I think they feel almost an inferiority complex. Academically they think that we probably had more education than they did.*
>
> *The people in our class that I think of with this problem feel that the women have the grades but that that's not what it takes to make a good veterinarian. You know, they think it takes a lot more than just "A's" and so that's why they feel a little bit of resentment. They think a male with less grades could have become a better veterinarian. (Group interview, mixed years, female)*

Women students reported often feeling singled out for teasing about their work because of their sex. However, they more commonly reported being treated as 'one of the guys':

> *We get teased--all of the women get it--like 'girls wouldn't know anything.' Mostly we get treated more like one of the guys. You have to desensitize yourself and ignore it--the effort to stay a female is hard work. We don't like dirty jokes or profanity and they don't respect our wishes to stop. It hurts; they wouldn't do those things to their wives. (Fourth year student, female)*

Many of our women respondents felt that the men treat them differently than other women. Much of this different treatment is expressed as teasing:

> *We get the 'home-ec putdown' from male vet students; more of a ribbing, joking. We can't keep kidding under control. There're more of them than us. We're kind of spread out; we don't sit together, don't hang together. We're different personalities so you can't expect us to hang together. I feel like we're kind of in the 'trying-out' group. (Group interview, second-year students, female)*

The women said they often found themselves in a double-bind situation with both male faculty and male students. Women do not want to be forced to give up their femininity and be 'one of the guys', nor do they want their femininity to be a problem for them, but many felt they could not win approval from the males no matter how they behaved:

> *Yeah, I think you do find in this school, there are situations where the male students and professors try their best to be crude or gross or something, trying to make you show that you're a weak feminine thing and you're either going to blush or faint or something...But you lose on both counts. If you don't, you're a hard-nose. Nobody wants to date you or anything like that because then you've lost your feminine image. But if you do, immediately, well, you couldn't handle it on your own so you're not fit for vet school...I think they're trying to prove to themselves that they can shock us or something. I don't know. You're in a man's world now. You're out in a barn. (Group interview, mixed years, female)*

The message that women frequently get is that they are unwelcome in the profession. Often, the message is quite explicit, and not couched in joking terms. It may begin the first day of classes:

> *Vets are hardheaded about women. One guy said at orientation, "Women don't have any place in the profession." None of the women opened their mouths. The women were really quiet. I thought it was far-out of the guy to lay it on the line like that. (First year student, male)*

The assumption that some individuals may hold that there is no place for women in the profession may affect the women student's learning experiences. Faculty, technicians, and owners or managers of off-campus clinical sites have a great deal of control over how much the students get to see and learn during clinical work. Students must often crowd in around each case to observe or to get a chance to try a procedure themselves. The individual in charge--nearly always a man--often controls the degree of a student's participation:

> *The first time I went to a dairy I was kicked by a cow. I mean, just literally kicked and I slid into the manure and stuff. My ego was horribly crushed because I was the only girl in the*

> *group and it was the last cow we were working on and she got me. I just went skidding along in the manure and the owner of the dairy came out afterwards and made a big joke about it. After that, the whole first year when we would go to places it would be the crude jokes and the teasing and all that and yet never being given any position with any responsibility...even if it's running the chute. Gradually, you get to do a little more because they see you over and over and finally they do accept you, most of them...but it takes a long long time. And to this day they know that I could do the job and probably they wouldn't call me out. (Group interview, mixed years, female)*

Some of the learning loss women experience is sometimes the result of another type of double-bind situation. Women we interviewed reported that flirting seems to be expected and may even often even be "required" to get on in clinical learning experiences. Women who do flirt, however, then feel "condemned" for "using their femininity" to get ahead.

R *And if you refuse to play the game, flirting, they'll put you pretty low on the totem pole.*

I *How so?*

R *Because it involves not just professors but technicians and there are a lot of students at this hospital and you're trying to see something and to do something. Well, it's very easy for them, if you haven't responded to their cute remarks, to just sort of keep you to the side instead of saying, 'Oh, come on, get in here, why don't you do this...'*

I *What about men students? How do they get to do these things?*

R *Well, they go just on their own, not on the fact that, you know, so-and-so is cute and so-and-so plays around. They play games too, but they're different kinds of games.*

And yet these same men will play the game themselves, will flirt around with the girls and then turn right around and say, 'You know, she is successful because she gets such and such done because she flirts around.' So you know, they encourage it, yet right away they're ready to condemn a woman who is using her sex to get ahead in her profession. (Group interview, mixed years, females)

Some of the faculty seem to be aware of the problems women encounter in trying to get enough clinical experience and try to compensate.

> *A lot of the older instructors here will go out of their way to give a woman a chance because they think they've been impeded in their education because of the competition. I think I've seen that with some of the older people around. They'd rather have a woman come up and directly supervise the woman and then have the woman go on and show her classmates. I think they're willing to give us that advantage. (Group interview, mixed years, female)*

However, when faculty give women compensating advantages which also cause problems with male students viewing the situation as unfair competition again. Another woman student observed that this singling women out for special treatment also implies that women can't do the work themselves and therefore need help:

> *There is less hassle than I expected; most faculty are supportive and don't directly resent you. My relationships with most professors are good. Occasionally we get favorable treatment, which implies no faith in women's ability. Favoritism is slitting our throats. (Group interview, first-year, female)*

This lack of faith in women's ability to do the work results in many women feeling continually challenged to prove themselves for some it weakens their faith in themselves. Women's feelings that they have to prove themselves surfaced repeatedly in our interviews:

> *I feel representative of women--a minority has a load to carry. You feel you have to prove yourself, work harder. (Group interview, third-year, male and female)*
>
> *Women feel on the defensive and pressured to prove that they won't give up. I don't know if women can pull calves all day. (Group interview, first-year, male and female)*
>
> *Women will find it difficult. There will be problems with instructors and classmates' attitudes. They will have to work harder to prove themselves as capable. (Clinical faculty, female)*
>
> *It's really up to the girls, to some extent. If they have a client who is doubtful of their ability, they*

> *have to show them they can do it--prove themselves. We can't help them there very much--somewhat, but not really. (Clinical faculty, male)*

Women we interviewed rarely said that they were discriminated against, and as an alternative tended to take the put-downs they experienced personally.

> *This may be misunderstood. I don't want to single people out, it could just be personal--I'm not a women's libber. I have talked to other women in the class and it's hard to explain, but you just feel that certain clinicians don't like women. (Group interview, fourth year, male and female)*

Women's experiences served to increase the isolation that they expressed feeling and emphasized to them that they are "out of their place". There is little time in the training schedule for outside activities or friends. Many women feel unwelcome in the school and in the profession, and the few outside people they meet often can't believe they're actually going to be veterinarians or even that they want to be veterinarians:

R^1 *Every once in awhile we'll get someone who will look at the group of say three boys and a girl and she'll say--you're gonna be a veterinarian, you're male, you're gonna be a veterinarian, and what are you gonna be dearie, a technician? They just don't realize that you could be one.*

R^2 *That happened to me with the legislative tour. I had lunch with a Senator and during the whole lunch--I don't know what he thought I was--and then when we arrived here an hour later he says--oh are you a veterinarian too. I said, yes sir.*

R^3 *There was this man who brought in his horse and he brought in a lady friend and she kept saying--I can't believe all the women that are in here...*

> *she just went on and on. She said--do you really* ***want*** *to be a veterinarian? (Group interview, mixed years, female)*

The women students we interviewed reported feeling a great deal of social isolation and separation from their own sex and from men:

R *I am starved for intelligent woman companionship.*

I *What about women classmates?*

R *I'm with them too much of the time. (Fourth-year student, female)*

> *Aggressiveness--I sense that men in my class assume you're harder to handle than other women--why should you be docile? It's this part of the country. They assume that getting married, or being someone's fiance or girlfriend are women's goals. We threaten men. It irritates me that in a group of people--half women and half men--the one professional women is often by herself someplace. At parties we don't relate to the wives or to the men; our dates feel out of place. We get taken out of the female role altogether and become an 'it.' My family hints, 'Why don't women stay home?' (Group interview, first-year, female)*

Women expressed this isolation as a costly personal experience. The rigors and pressures of professional education combine to make the training years a very stressful time when contact with and support from friends and peers is needed. Yet, for many women, support is often inadequately available.

> *We get social conditioning. You have to be able to take stress to make it in this profession. Women have to have more determination than men because you're fighting yourself as well as regular training pressures. (Second-year student, female)*

> *What you bargained for is a male profession and to work with men. (Third-year student, female)*

> *A lot of women like the easy way out--let someone take care of them. (First-year student, female)*

Most women find some way of letting off the pressure. The women below describe a composite of ways of coping, and distill the loneliness that women students feel.

> *The most important thing is to not get on anybody's bad side when I have to be with them for four years. Practically all of us feel extremely threatened. I go home and cry or take my dog out and throw the stick for her until I wear myself out. I always work the anger off some way or another. It's hard for me to cope. I can't really be a friend to men. There is a lot of teasing. It's easier to just shrug it off. I always get better grades but they won't take help from 'a girl', becuase they feel they should be doing better because they are men. (Third year student, female)*

> *I always had emotional wonders about what you're expected to do. I've really felt strongly that there was one set of expectations for what a woman was supposed to be and there was going to be a line up the middle in you. It's been difficult for me to say, 'OK, I'm me and I'm a mosaic of these.' (Group interview, mixed years, female)*

While women we interviewed in veterinary schools seemed to encounter many of the problems women have disucssed with us at other MODVOPPP schools--especially those of being "tried out" or "having to prove yourself"--there was a strong sense that it is possible to pass the test, to prove one's competency. The women themselves felt strongly that they are physically as able to do the work.

> *Sex roles can still be maintained while practicing veterinary medicine--even large animal, which is what I am going into as a career. The size of a female shouldn't interfere with large animal work any more than a small male vet--many of them are ex-jockeys, for example. I weigh 118 and I know once I understand the mechanics involved in the situation I will be able to accomplish it no matter what strength is required. I'm an optimistic person. (Fourth year student, female)*

The optimism this woman expresses seemed prevalent among the women we interviewed particularly when discussing future practices. With the exception of some large animal work, women felt they had been well-received by clients in their clinic and summer work experiences. Male students, who often are the source of problems for the women, apparently are, on the whole, willing to give the women a chance. A third year male student remarked that "the women definitely pull their own weight", and a fourth year woman observed:

> *The men in our class have been real good--they're becoming part of the* [woman's] *movement.*

Another fourth year woman student summed up her career decision in a group interview:

> *We have great pride in our profession...I wouldn't do anything else.*

VI. SUMMARY AND CONCLUSIONS: IMPLICATIONS FOR WOMEN IN VETERINARY MEDICINE

PROFESSIONAL PRACTICE

Economic/Organizational Base

The present trends in types of professional practice have incidentally worked to the benefit of women in the profession in terms of their historic roles in veterinary medicine. Increasing numbers of women in the profession have selected, for whatever reasons, to specialize in small animal practice in increasing proportions at the same time that the demand for small animal practitioners has steadily risen. Small animal practice is one of the more lucrative specialties, although women are more often employees than owners. The current trend toward group practices is also advantageous for those women who need limited or flexible working hours in order to stay in active practice while children are small.

While women seem to be channeled into the more feminine specialties like small animal or laboratory animal work, and the available data on practice patterns support these as "women's fields," our respondents do not seem to fit these patterns at all. Of those who have contemplated possible specialty choices, six had chosen large animal work, another six were deciding between equine and other large animal work such as food animal, and three had selected other fields--two such specialties and one small animal.

The study respondents, of course, are still in school, and it is possible that as the broader practice options (e.g., other than private practice) become clear, some will alter their selections. Still, our respondents list of specialty choices is a very different list than we would have expected.

There are a few assumptions we can make about the future for women in the profession from the information at hand. First, one faculty member felt that with the expanded enrollments and opening of new schools there may well be too many graduates five or ten years from now. However, projections to 1980 indicate a need for 44,000 (6:5) practitioners, nearly double the present number. Therefore, we do not foresee problems for women in terms of numbers. However, they will probably continue to encounter resistance in entering the more masculine specialties like food animal work.

Also, since many of our women respondents have rejected the traditional choice of small animal work, they may find themselves concentrating in the less remunerative fields in the future. Or those new fields considered "a natural" for women (such as laboratory animal medicine) may become female sex-typed and, as often is the case in such situations, pay less well and be accorded less prestige within the profession.

Technology

Technical advances in the profession have eased the work in some areas for both men and women practitioners, particularly by reducing the physical strength requirements. We can assume that future developments will have the same benefits.

The Practitioners Themselves: Changing Lifestyles

Changes in practice patterns may be dictated by economic pressures, but the net results (i.e., the means chosen to cope with economic pressures) seem to reflect active choices in how people want to live their lives. Group practices or institutional employment relieve the practitioner from being on-call on a 24-hour, 52-week-per-year basis; night calls can be alternated, weekends and vacations covered. These changes are attractive to women who have a family as well as practice demands on their time, but are also appealing to men who wish to spend time with their families or to pursue other interests. Private, solo practices will not disappear entirely, but few recent graduates can afford to set up new, or buy out existing, solo practices. Most graduates are so saddled with debts from their graduate and undergraduate years that further borrowing is difficult. Recent federal rulings have declared that banks may not discriminate against women in granting credit. However, in fact, women still have difficulty financing their educations and practices. At the same time, few students graduate with sufficient knowledge of small business practices, finance and tax laws to confidently begin their own practices. Both schools we visited give short courses on practice management, but few students seemed to feel this is sufficient. We feel these factors will combine to increase the proportion of women working for institutional employers and that recent graduates, of both sexes, will continue to seek positions or partnerships in group practices.

VII. SPECIAL RECOMMENDATIONS

WORK FOR THE ASSOCIATIONS TO DO

The Bureau of Health Resources Development, in recognition of the need for "improved and expanded information on the supply of health manpower in the health professions for which it has legislative responsibility" (15:preface), contracted with the American Veterinary Medical Association (AVMA) in 1972 to survey the existing veterinary manpower data system and to make specific recommendations on ways of filling data gaps. A "for administrative use only" report was published in May 1974, and no new data gathering system has been developed yet, so that we are dependent on the existing reporting systems for this report. There is very little national or school-by-school information available by sex. The Women's Veterinary Medical Association (WVMA) collects information on women practitioners, but no comparable data exist for men.

Therefore we feel that is is important for the American Veterinary Medical Association to collect and publish comparative data, by sex, on practice patterns including type of practice, urban/rural, ownership, average hours worked per week, time spent active/inactive and so on. The AVMA or the schools should collect data on students including attrition (and reasons), specialty interest, demographic data, average GPAs, and class ranks.

A second possibility would be to compile lists of current internships and residencies, what stipends or salaries they offer, their learning opportunities and duties. This information should then be systematically distributed (perhaps printed in the AVMA Journal) to insure that maximum numbers of students and practitioners have access to it. The profession has probably considered the advantages and disadvantages of regulating the postgraduate training system. It appears to us that it would be in the best interests of the profession to do so. Minimizing the importance of informal networks is usually in the best interest of women as well.

The third, and possibly most important, effort needed is to direct what recruiting resources are available toward high school and college counselors and pre-vet advisors. Counselors need to know that veterinary medicine is a career option available to women and that the profession is interested in attracting the best possible talent.

WORK FOR THE SCHOOLS TO DO

The major effort needed on the part of the schools has already been mandated by the Council on Education. The traditional curriculum is not responsive to the desires of today's students for increased training in practice management, new specialty areas, and earlier clinical contact. On-going curriculum review is now being conducted by the schools.

Schools recognize that a substantial proportion of their student body is female, but they have not made sufficient accommodations to the different needs of women students. Schools should made sure that women have the facilties, equipment, and services they need to function in school without extra problems men do not have to bear. Women's reports on problems in this regard include:

- No surgical greens in women's sizes
- Not enough lockers for women
- Inadequate space for changing or on-call sleeping facilities
- Not enough women's bathrooms
- No sanitary napkins in the bathrooms that exist

According to our respondents, in cases where women have brought these problems to the attention of the school, there has been no response.

Schools should also clearly assume responsibility through policy statements and informal faculty pressures to control disparaging remarks about women made by faculty in official school contexts such as the classroom or laboratory. Negative faculty behavior toward women students encourages and sanctions such behavior on the part of their male peers. Finally, much can be accomplished simply by dispelling rumors that women get special treatment in admissions and that they are not really qualified but got in "just because they're girls."

Experiences at some schools where entering GPAs were posted by sex (but not by name) appear to have proved effective in countering such rumors.

WORK FOR THE RESEARCHERS TO DO

Research is needed on supply and demand projections, not just for the profession as a whole, but for the various specialties as well. Aside from the concern that we may produce too many of the wrong type of practitioner, studies should focus on the specialty choice of men and women and the reasons for these choices.

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ABBREVIATIONS USED IN TEXT

AAVMC	American Association of Veterinary Medical Colleges
AVMA	American Veterinary Medical Association
BAI	Bureau of Animal Industry, US Dept. of Agriculture
BHRD	Bureau of Health Resources Development, HEW
GPA	Grade Point Average
GP Vet	General Practice Veterinarian
MODVOPPP	The eight health professions--Medicine, Osteopathic Medicine, Dentistry, Veterinary Medicine, Optometry, Podiatry, Pharmacy and Public Health
VAT	Veterinary Aptitude Test
USDA	United States Department of Agriculture
USVMA	United States Veterinary Medical Association (later became the American Veterinary Medical Association)

APPENDIX A

SUMMARY OF INDIVIDUAL AND GROUP INTERVIEWS, NUMBER OF SCHOOLS VISITED, OTHER CONTACTS WITH THE VETERINARY MEDICAL PROFESSION

A. NUMBER OF SCHOOLS VISITED: Two

B. BREAKDOWN OF INDIVIDUAL INTERVIEWS:

	Male	Female	Total
Administrators			
1. Deans, Presidents Chancellors	1	--	1
2. Assistant or Associate Dean	4	--	4
3. Affirmative Action Officers	--	1	1
4. Other Administrators	3	2	5
TOTAL	8	3	11
Faculty			
1. Pre-Clinical	2	2	4
2. Clinical	9[1]	5[1]	14
TOTAL	11	7	18
Students			
1. First Year	5	4	9
2. Second Year	2	5	7
3. Third Year	--	4	4
4. Fourth Year	--	2	2
5. Unknown Year-in-School	--	1	1
TOTAL	7	16	23
GRAND TOTAL	26	26	52

[1] Includes 4 male faculty interviewed as a group, and 4 female faculty in a group interview.

C. GROUP INTERVIEWS

Male		Female		Mixed		Total	
# of Groups	Est. Avg. (N=7)	# of Groups	Est. Avg. (N=7)	# of Groups	Est. Avg. (N=8)	# of Groups	Est. Total
0	--	5	35	3	24	8	59

D. OTHER CONTACTS

By telephone:	American Veterinary Medical Association, Association of American Veterinary Medical Colleges, Inc., Angell Memorial Institute
Visits:	American Veterinary Medical Association, Association of American Veterinary Medical Colleges, Inc., American Veterinary Medical Association Washington Office
Letters:	American Veterinary Medical Association, Association of American Veterinary Medical Colleges, Inc., Women's American Veterinary Medical Association.

APPENDIX B

SUMMARY OF ASSOCIATIONS

American Veterinary Medical Association (AVMA)

The American Veterinary Medical Association (AVMA) was founded in 1863 (as the United States Veterinary Medical Association. The name was changed in 1898.) It is the oldest and most powerful national veterinarian's organization. Through its active membership (as of 1973 membership stood at 80.22% of licensed veterinarians nationwide (11); 84% of the women veterinarians belonged (1)), journals, councils and committees, and its support of state and local professional activities, the AVMA is the most important of the veterinary associations. The annual cost of membership for active veterinarians is $75. The journals published by the AVMA include the AVMA Journal and the American Journal of Veterinary Research. The AVMA councils are:

- Judicial Council
- Council on Education
- Council on Research
- Council on Veterinary Service
- Council on Biological and Therapeutic Agents
- Council on Public Health and Regulatory Veterinary Medicine

In addition, the AVMA maintains a committee for Scientific Programs, a Group Insurance Trust, a Professional Liability Insurance Trust, the AVMA Foundation, a Retirement Committee, and a Women's Auxiliary (wives of members).

The AVMA Council on Education is the accrediting body for schools of veterinary medicine. The council membership is composed of representatives of the following areas:

• Basic Science	1 member
• Clinical Science	2 members
• Postgraduate Education	1 member
• Private Large Animals	1 member
• Private Mixed Practice	2 members
• Private Small Animal	1 member
• Regulatory Veterinary Medicine	1 member
• Military Veterinary Medicine	1 member
• Veterinary Public Health	1 member
• Veterinary Medical Research	1 members
TOTAL	12 members

The Council continually revises the "Essentials of an Acceptable Veterinary Medical School." These standards are reviewed by the AVMA Executive Board and are proposed to the House of Delegates. If approved by the House, they become policy. In this manner, the House of Delegates is actually the policy-making body for school accreditation.

The evaluation committee (four council members--two basic science, two clinical science) visits schools with no more than five years elapsing between visits or within one year after the appointment of a new dean. On a visit to a school the committee visits all departments and meets with the dean, students, faculty committees including curriculum, administrators and the president of the university and extension veterinarians. Visits last at least four days.

In addition, the school is expected to have carried out, within the year prior to the visit (a school gets six months warning of a visit) an institutional self-study covering the following areas:

- Curriculum
- Budget
- Adequacy of Faculty and Staff
- Adequacy of Physical Facilities
- Clinical Case Resources
- Teaching Methods
- Learning Aids
- Personnel Policies and Practices

Reports of the visit are prepared and discussed with the chief administrator (president) of the parent institution and the dean. A final report is submitted to the Council.

The accrediting process can play an extremely important role in institutional and even professional reform. The internal review process can provide an occasion where all interested parties--administrators, faculty and students--meet not just over specific issues but to discuss the overall thrust of the educational enterprise. And the external accrediting body does have a genuine power which can be used in a positive and creative way.

American Association of Veterinary Medical Colleges (AAVMC)

Working in close association with the AVMA is the American Association of Veterinary Medical Colleges (AAVMC) which is largely composed of veterinary college administrators. The members share information regarding the operation of the colleges, and work to upgrade the quality of veterinary medical education. The AAVMC serves as a resource for information on innovative curriculum changes, news about and interpretation of federal regulations, etc. It does not publish a journal. The AVMA and AAVMC maintain a joint institutional committee on veterinary education. This joint committee can also be influential in the process of change since the members of the committee are powerful individuals within the schools.

The AVMA maintains a student chapter at each school. The student AVMA elected representatives meet annually in conjunction with the AVMA convention and have an opportunity to present their concerns to the parent body. While the student AVMA does not represent a powerful influence, it may be a helpful forum for women's particular concerns. The 1965 study of Michigan graduates(9) points out that women participate in associations at a greater rate as students than later in local, state, and national professional associations.

MICHIGAN STATE UNIVERSITY WOMEN GRADUATES
PERCENT MEMBERSHIP IN PROFESSIONAL ASSOCIATION: 1968

	Student AVMA	AVMA	State Assoc.	Local Assoc.
Was/Is a member	77%	62%	50%	42%
Held office	13	0	0	6
Attendance at meetings:				
Regular	54	10	11	23
Occasional	11	31	21	11
Never	2	13	10	2
No response	33	46	58	64

SOURCE: Betty Giuliani and John Centra, "The Woman Veterinarian," Personnel and Guidance Journal, June, 1968, pages 971-75.

Women's Veterinary Medical Association (WVMA)

The Women's Veterinary Medical Association (WVMA) is an adjunct of the AVMA and holds its convention at the same time and place as the AVMA. It has no permanent headquarters. It is important to note that the WVMA membership is considerably less than the actual number of women practitioners. One woman student expressed her view on membership as follows:

> *There's a WVMA--I would never join one of those things. Then you're just creating a separation. I think women should just forget that a separation exists and look at things positively. (Fourth year student, female)*

In the Michigan State University study, only 19% of the women graduates indicated WVMA membership, and none regularly attended meetings.

Specialty Certification Boards

Ten specialty boards are recognized by the AVMA:

- American Board of Veterinary Public Health (1951)
- American Board of Veterinary Toxicology (1970)
- American College of Laboratory Animal Medicine (1957)
- American College of Theriogenologists (1971)
- American College of Veterinary Internal Medicine (1972)
- American College of Veterinary Microbiologists (1968)
- American College of Veterinary Opthalmologists (1971)
- American College of Veterinary Pathologists (1951)
- American College of Veterinary Radiology (1956)
- American College of Veterinary Surgeons (1970)

Specialty and Other Associations

Other organizations of veterinarians in various fields are as follows:

- Academy of Veterinary Allergy
- Academy of Veterinary Cardiology
- American Academy of Veterinary Dermatology
- American Animal Hospital Association
- American Association for Accreditation of Laboratory Animal Care
- American Association of Avian Pathologists
- American Association of Bovine Practitioners
- American Association of Equine Practitioners
- American Association of Extension Veterinarians
- American Association of Feline Practitioners

- American Association for Laboratory Animal Science
- American Association of Sheep and Goat Practitioners
- American Association of Swine Practitioners
- American Association of Veterinary Anatomists
- American Association of Veterinary Clinicians
- American Association of Veterinary Laboratory Diagnosticians
- American Association of Veterinary Nutritionists
- American Association of Veterinary Parasitologists
- American Association of Zoo Veterinarians
- American Society of Laboratory Animal Practitioners
- American Society of Veterinary Anesthesiology
- American Society of Veterinary Clinical Pathologists
- American Society of Veterinary Opthalmology
- American Society of Veterinary Physiologists and Pharmacologists
- American Veterinary Exhibitors Association
- American Veterinary Neurology Association
- American Veterinary Radiology Society
- American Veterinary Society for Study of Breeding Soundness
- Association of American State Boards of Examiners in Veterinary Medicine
- Association of State Public Health Veterinarians
- Conference of Research Workers in Animal Diseases
- Educators in Veterinary Radiologic Sciences
- Flying Veterinarians Association
- Industrial Veterinarians Association
- International Association of Aquatic Animal Medicine
- International Congress of Physiology and Pathology of Animal Reproduction and Artificial Insemination; Standing Committee
- National Assembly of Chief Livestock Health Officials
- National Association of Federal Veterinarians
- National Board of Veterinary Medical Examiners
- National Mastitis Council, Inc.
- Pan American Congresses of Veterinary Medicine
- Registry of Veterinary Pathology--A.F.I.P.

- United States Animal Health Association
- Veterinary Amateur Radio Operators
- World Association of Veterinary Food Hygienists
- World Veterinary Association
- World Veterinary Poultry Association

APPENDIX C

CHRONOLOGY OF THE DEVELOPMENT OF THE PROFESSION

In the interest of clarity, the founding and closing dates of 33 of the 34 now-extinct colleges of veterinary medicine have been omitted from the chronology and are listed separately. The first college, Philadelphia, is included since it represents long years of struggle to bring a scientific basis and professional stature to the veterinary art.

1646	First use of the term "veterinarian" (as opposed to "farrier," cow-doctor, or horse-doctor) in English writing by Sir Thomas Browne. Not in general usage in the United States until well into the 19th Century.
1847	According to George Dadd, editor of the American Veterinary Journal, there were 15 graduates of veterinary schools (foreign, mostly French and English) in the United States.
1852	First professional school, the Veterinary College of Philadelphia founded as a result of the efforts of the Philadelphia Society, an organization of practicing farriers and physicians. The college closed in 1870, and the number of graduates is unknown.
1863	USVMA founded.
1878	First attempt (by veterinarians) to regulate practice by state. Bill presented to New York State Legislature to establish five-man board--three veterinarians and two physicians--to examine non-degreed veterinarians. Practitioners with a degree from a recognized veterinary school would be licensed without examination. The bill did not pass, partly due to lack of unity among practicing veterinarians, most of whom did not possess degrees.
1879	Iowa State College of Veterinary Medicine founded.
1881	New Jersey Veterinary Society tried to establish state regulation of the use of DVM and other veterinary degrees by non-degreed practitioners. Did not pass Legislature.
1882	New York again tries for licensure, this time only requiring a diploma. Not passed.
1883	Pennsylvania tries to establish state licensure. Illinois also tries.
1884	The Bureau of Animal Industry (BAI) established in the U.S. Department of Agriculture.

1884	University of Pennsylvania College of Veterinary Medicine established. This school is significant since it is the only U.S. school which developed out of an existing medical program rather than an agricultural program.
1885	Ohio State College of Veterinary Medicine founded.
1886	New York passes the first bill regulating practice and establishes a licensing board of veterinarians.
1890	Federal Meat Inspection law passed.
1894	University of California College of Veterinary Medicine began on the San Francisco campus. It closed in 1900 and its staff continued to teach at the College of Agriculture. The present college opened at Davis in 1948 (see below).
1896	Cornell University College of Veterinary Medicine established.
1899	Washington State College opens in Pullman.
1905	Kansas State University College of Veterinary Medicine established.
1907	Colleges open at Auburn University and Colorado State University.
1910	Michigan State College of Veterinary Medicine opens.
1915	First women admitted to a college of veterinary medicine; four women at McKillip College.
1916	College established at Texas A & M University.
1944	College established at the University of Illinois.
1947	Colleges established at the University of Georgia, University of Minnesota,and Oklahoma State.
1948	University of California College re-opens at the Davis campus.
1949	College established at the University of Missouri.
1959	Purdue University founds College of Veterinary Medicine.
1973	Louisiana State admits first class for DVM degree at the College of Veterinary Medicine.

APPENDIX D

DATA ON EXTINCT COLLEGES OF VETERINARY MEDICINE IN THE UNITED STATES AND CANADA

(Arranged in order of their establishment)

	Name and Location	Estab.	Closed	Graduates
1.	Philadelphia, Veterinary College of	1852	1870	0*
2.	Boston Veterinary Institute	1854	1860	0*
3.	New York College of Veterinary Surgeons, New York City	1857	1899	291
4.	Montreal Veterinary College (Later at McGill Unversity, Montreal, Canada	1866	1903	268
5.	American Veterinary College, New York City	1875	1898	628
6.	Columbia Veterinary College, New York City	1877	1884	80
7.	Northwestern Veterinary College, Minneapolis	1881	1890	3
8.	**Harvard University, Boston, Mass.	1882	1902	128
9.	Chicago Veterinary College	1883	1920	2,387
10.	**South Carolina, University of	1888	1891	1
11.	Baltimore Veterinary College	1889	1891	1
12.	Detroit Veterinary College	1890	1899	35
13.	Iowa Veterinary College, Des Moines	1890	1894	13
14.	Kansas City Veterinary College	1891	1918	1,789
15.	Kentucky State Veterinary College, Lexington	1891	1895	1
16.	Ohio Veterinary College, Cincinnati (Not Cincinnati Veterinary College)	1891	1896	67
17.	Indiana Veterinary College, Indianapolis	1892	1924	884
18.	McKillip Veterinary College, Chicago	1892	1920	1,212
19.	National Veterinary College, Washington D.C. (later Columbian)	1892	1898	62
20.	United States College of Veterinary Surgeons, Washington, D.C.	1894	1927	419
21.	**Queens University, Kingston, Ontario	1895	1899	9
22.	Grand Rapids Veterinary College (Michigan)	1897	1918	572

	Name and Location	Estab.	Closed	Graduates
23.	Western Veterinary College, Kansas City Missouri	1897	1908	178
24.	New York American (later New York State Veterinary College at New York University	1899	1922	187
25.	San Francisco Veterinary College	1899	1918	330
26.	Cincinnati Veterinary College	1900	1920	410
27.	University Veterinary College Kansas City, Missouri	1902	1906	53
28.	St. Joseph Veterinary College St. Joseph, Missouri	1905	1923	414
29.	**West Virginia University, Morgantown	1905	1912	4
30.	**George Washington University, Washington, D.C.	1908	1918	100
31.	Terre Haute Veterinary College, Terre Haute, Indiana	1909	1918	145
32.	Southwestern Veterinary College, Dallas, Texas	1909	1916	21
33.	Arkansas Veterinary College, Fayetteville	1913	1920	25
34.	**Middlesex University, Waltham, Mass.	1938	1947	243
	Total Number of Graduates			10,960

SOURCE: American Veterinary Medical Association Directory, 1974, Chicago, Illinois.

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*Authorities differ as to the number of bona fide graduates, if any, of this College.

**This institution is not "extinct" but veterinary curriculum is no longer given.

APPENDIX E

SUMMARY OF STUDENT GROUP INTERVIEW ISSUES REGARDING PROFESSIONAL TRAINING

INTRODUCTION

URSA used two primary techniques for interviewing students about their professional training experiences in general and about the problems they encounter in gaining access to and pursuing professional training in particular. Each produced a different set of issues and different emphases.

URSA adapted a planning technique known as the Delbecq Nominal Group Process into a form of group interview which we used to surface from groups of students a broad spectrum of problems and issues they encounter in professional training. The groups were small--typically numbering less than twelve--and they included all female groups, mixed male/female groups, and all male groups. The group interviews gave us insights into which of the problems most group members shared, which seemed to present the greatest obstacles in professional training, and which are controversial.

URSA also conducted a series of individual one-on-one interviews with male and female students. The individual interviews often touched on problems and issues not raised in the group interviews because they might be considered "too personal", because they needed direct probes and encouragement to surface, because they were not shared by other members in the group, or because they were not directly related to the question the group was asked to address.

The list of problems included in this Appendix and the analysis which precedes it represent only those issues raised in group interviews by students in response to a single question posited them by the URSA field team. The list does not include any additional issues--and there were many--which surfaced in individual interviews.

As the study progressed, URSA used several questions in the group interviews, changing them to allow us to probe or follow new areas of concern. As most were non-productive (see VOLUME I on Methodology), this Appendix includes only responses to the question: "Given your experiences and observations, what problems does a woman encounter in becoming an X (doctor, dentist, etc.)?" for women, "Given your experiences and observations, what problems does a person encounter becoming an X?" for mixed groups, and "...what problems does a man encounter in becoming an X?" for the men.

Group members were given approximately ten minutes to write their responses to the question on a card, and the answers were recorded without discussion on easel pads so that all members of the group could see the responses. The list of problem categories included and discussed below was generated from the responses on these cards and on the easel pads. In most cases different issues were raised by men and women, but in all cases where the problem category was shared, it was discussed in different contexts, with different emphases, and in terms of a differential impact on men and women.

Generally the problems mentioned clustered into six categories: structural features of the school(s), profession(s), or sex roles; absence or inadequacy of programs, services, facilities, or equipment provided by the training institutions; problems with characteristics of the profession and its work; access to resources required to consider the profession, be admitted to school, and to participate fully in professional practice; negative attitudes and behaviors of peers, faculty, practitioners, and clients; and the impact on oneself of all of the above.

STRUCTURAL FEATURES OF THE SCHOOL(S), PROFESSION(S), OR SEX ROLES

This category includes all those structural features of the profession or school that affect women's experiences in training as well as structural consequences of societal sex roles which reflect the society's assumptions about appropriate roles for men and for women. By appropriate roles we mean those behaviors, feelings, attitudes, skills, attributes, characteristics, and motivations we usually associate with one sex to a greater extent and/or more often than with the other. Structurally, for women, this refers to the specific sets of responsibilities delegated to them by the society on the basis of their gender. Issues raised by women students in this category include:

Lack of Role Models

Basically this is an issue of how many and where women faculty appear in the schools. At some schools the problem is that there are no women faculty or clinicians at all to whom female students can look for evidence that a woman "can do it." In other schools, women appear only in what students consider the lesser status positions (e.g., Basic Science Instructors) which women students feel is a statement about a woman's proper role within the profession. At the few schools in which women clinicians appear in high level positions, some female students may reject them as unacceptable role models because the women have not managed to balance professional success in filling other feminine roles.

Lack of a Support Group of Women

Women students hope and sometimes expect that support from other women will help offset the social and professional isolation they feel in the male environment of the professional schools. The lack of such support is a severe disappointment and often aggravates the pressures of loneliness and isolation. This is a direct result of few numbers of women in a class or school and is compounded by differences in age and marital status.

Being Tracked into a Limited Range of Specialties or Practice Opportunities

This problem has two aspects. Certain specialties and practice options in each of the professions are labeled as more or less appropriate for women. To some degree these labels are consistent with commonly held stereotypes regarding women in this society. For example, the specialties involving work with children are all considered appropriate for women. Similarly, regarding practice options, those that involve supervising a staff and running a business are generally regarded inappropriate for women. For most women in making the decision regarding specialty selection or practice choice, the stereotypes and pressures to go into one rather than another selection are important. More important, though, are those problems arising from the necessities in a woman's life of carrying responsibility for both a family and a profession. This consideration, and at times necessity, works to track women into those specialties or practice options that are most easily controlled in terms of numbers of hours worked.

Balancing Work/Family

The years of professional training coincide in our society with a woman's childbearing years. To the extent that women are primarily responsible for the home and children, the problems of time management, energy commitment and sheer logistics in being a full-time student and committed practitioner and wife/mother at the same time create a tremendous pressure and problem for women that men do not experience. This is the single most widespread, cross-professional issue of which women spoke. If the women were not already in the position of managing both wife/mother and professional (student) roles, they anticipated that they would in the future.

Women at a Disadvantage Due to Background or Physical Ability

In some professions women feel that they have a distinct disability or handicap due to their background and socialization as women or due to physical size. In dentistry, for example, a familiarity with tool use and terminology is important and often assumed by the schools. Many women spoke of the problems they encountered in picking up such skills and information that the schools assumed they had but didn't (and that many male students did, in fact, have). In other professions where physical size and strength are important, women spoke of the difficulties and inequities in trying to learn techniques that were developed for the male physique.

Social Problems: Fear of the Impossibility of Finding a Mate

Women in all the MODVOPPP professions speak of some problems with dating men who do not understand, support, or accept their choice of a male profession. In medicine women speak of the fear of never finding a male who could accept their high status, high pay, and strong professional commitment. This problem is uniquely women's because it is an accepted pattern in our society for men to marry women who have less social status and less earning power than they. For women in professions with top status and pay, the range of men for whom they make appropriate matches tends to be limited to the men within the profession who might be more successful than they.

ABSENCE OR INADEQUACY OF PROGRAMS, SERVICES, FACILITIES, EQUIPMENT AND OTHER SUPPORTS OR RESOURCES

When schools fail to provide, or provide inadequate, resources in the learning environment and training program, difficulties are caused for women. This becomes an issue when their special or equal needs are not met by the physical plant. For example, when uniforms, lab coats, surgical gowns, etc., are not available in women's sizes women have to wear things too big for them or dress in the uniforms of other health professionals (such as clerks in pharmacies, nurses in surgery). Changing rooms, lounges, women's toilets, and on-call sleeping facilities are often not as available and accessible to women as to men. Health care services or insurance often do not cover gynecological and family planning services. Child care is not available. Escort services are not available for women working late in labs, clinics, or libraries.

CHARACTERISTICS OF THE PROFESSION AND ITS WORK

Issues in this category were only mentioned by male students. The category includes features of the work or of the profession which create a pressure on the student and on the practitioner. For example, the life or death responsibility of a physician is felt heavily by medical (both MD and DO) students who feel a special necessity for learning everything possible while in training, for developing emotional means of dealing with that responsibility, and for demanding a more than full-time dedication and commitment from themselves and their peers. An issue more widespread among the MODVOPPP professions has to do with the relative status of a profession vis-à-vis the medical profession. Particularly in the lesser known professions that are struggling with the medical profession for recognition and control over practice rights, the lower status is seen by male students to be a large obstacle to public acceptance.

ABSENCE OF OR DIFFICULTY IN GAINING ACCESS TO RESOURCES REQUIRED TO CONSIDER PROFESSION, BE ADMITTED TO SCHOOLS, OR ESTABLISH FULL PROFESSIONAL PRACTICE

Lack of Encouragement and/or Information

Given the rigors of training and the added pressures for women in a male profession, institutional and informal supports are vital. Women feel a lack of encouragement and support and at times experience direct discouragement. Particularly in the decision to pursue a profession the amount and extent of information and encouragement given women is vital. Although men spoke of a lack of information as an issue for them in the lesser known MODVOPPP professions, it is even more difficult for women. A related issue is access to information passed along informal networks that do not include women--e.g., fraternities, golfing partners, etc., giving helpful hints or suggestions for "how to get what you want" peculiar to the profession.

Access to the Profession's Informal Network of Practitioners

Women experience problems in this area both in training and when trying to obtain access to internships, residencies, or jobs. While in training, women report they are left out of the informal male network in which information is exchanged, support given, and friendships formed. These settings include fraternities, men's changing rooms, golf, and other athletic teams. Women worry that this will result in being left outside the referral and job network when they become practitioners. All students, male and female, worry about getting jobs, internships, and residencies. Women devote much of their energy in this regard to figuring out how to deal with the well-documented and well-known prejudices against women held by practitioners. This increases the pressure on women to "prove" themselves, reinforces the feeling that they aren't welcome in the profession, and most importantly, represents a real obstacle to women in getting through training and into professional practice. Jobs passed from fraternity brother to fraternity brother, practitioners relying on informal recommendations from their friends regarding which applicants to accept to their practice, and prejudices about the abilities and competencies of women all result in important limits on women's access to these positions.

Absence of Appropriate Personal Characteristics and Attributes Required of Students, Practitioners

This problem was expressed in resentments and statements made by male students in their group interviews and by women in terms of the main stereotypes which the women feel are used to challenge their presence in the schools and in the professions. Frequently mentioned stereotypes include: "women are too emotional", "women are only accepted because they are women", "women are less dedicated", "women are only here to prove something", "women are not good at analytical thinking", "women are too indecisive to be good managers".

Absence of, Concern about Ability to Meet Formal Requirements of Students, Practitioners

This category of issues was mentioned only by men in most professions. It was expressed as concern about passing courses, passing the National Licensing Boards, etc.

Access to Financing

The financial burden of training is felt by both male and female students, but it is expressed to a different degree and in different contexts. For women it is harder to earn money before and while in training. The jobs available to women often pay less money, and in some professions where jobs are available to the untrained (e.g., veterinary clinic assistant), women are not given the jobs. While in training women report they believe it is more difficult for women to get adequate loans. Parents are often less willing to support a woman than a man through expensive and long training. Spouses are less often available as a source of support for women.

NEGATIVE ATTITUDES AND BEHAVIORS OF OTHERS

This category includes the constellation of attitudes, reactions, and behaviors which women face daily in the training environment.

Incidents of Sexism in the School

We heard many and various reports of jokes at the expense of women--e.g., denigrating comments, nudie slides in lectures, actions or comments aimed at embarassing or "putting down" women, intentional or unintentional use of language in such a way as to ignore or put down women. The majority of these incidents were performed by male peers or male faculty.

Resentments by Male Peers

This resentment is primarily expressed by male students in regard to competitive situations in the profession. For example, it includes resentments that women in school are taking a man's place, that women getting jobs means less for men. It also includes beliefs that women get special treatment by admissions committees, faculty members, and clinicians. Another source of resentment from male peers regards the amount of sexuality that is regarded as appropriate in women. At some schools males express disapproval of the women for stepping outside the boundaries of a traditional woman's role, thus in some way challenging their own assumptions about and ways of dealing with women.

Client Prejudices

This category includes both real and anticipated problems with patient disbelief, distrust, and sometimes refusal to be treated by a female practitioner. The result of these prejudices is that while in training women may be denied important learning opportunities, while in practice it may be more difficult for them to get patients, and in all cases they must anticipate the necessity of proving their competence.

The Prejudices of Staff and Employees in Clinic Settings

In the professions that include a business or managerial component, prejudices and unwillingness of employees and staff to be supervised by a woman is particularly difficult. In all the professions, respect and acceptance as a professional by other health workers is essential. Women report that respect and acceptance are denied them because of their gender.

THE IMPACT ON ONESELF OF STRUCTURAL FEATURES, THE ATTITUDES, AND BEHAVIORS OF OTHERS, OF THE TRAINING PROCESS ITSELF

All of the above listed problems mentioned by women have some impact on their own feelings about themselves and their profession, on the choices they make, and on their behaviors.

Women's Double Binds

This category was variously described by women as "walking a very thin line", "damned if you do, damned if you don't", and "you can't win as a woman and as a professional." Standards of professional behavior conflict with standards of feminine behavior and women are caught in the middle, particularly in situations requiring aggressiveness, decisiveness, or managing others.

Women's Feeling That They Must Work Harder to Prove Themselves

The combined pressures and impact on women of stereotypes that challenge women's abilities, competencies and commitments result in women reporting the following kinds of problems: women fear making mistakes or taking risks; they fear speaking up or asking questions that might be considered stupid; they feel they have to work twice as hard to be recognized by faculty; women feel reluctant or unable to ask for any special support or help out of fear that the request would reinforce negative stereotypes about women.

Problems with Maintaining Relationships/Other Interests

This has most to do with the emotional strain, academic time pressures, and isolation of being a health profession student. Both male and female students feel cut off from friends not in training with them, and they experience problems in finding energy to devote to significant relationships and in lack of time to spend on other interests. While these problems were mentioned with equal emphasis by both men and women, for women the problems of isolation and being cut off from people outside of the training experience increases the difficulties they experience of being isolated within the training environment, too.

Competition and Academic Pressures

Only male students have expressed this as a concern in each profession, and it appears to be a central problem for them.

Feeling You Must Turn Off Your Emotions

Although related to double binds for women where expressing emotion is considered inappropriate as professional behavior, this is a specific issue that was raised by both men and women. Professional conduct and the pressures of dealing with many cases in a small amount of time demands a certain distancing on the part of the practitioner. Women and some men take issue with these demands because they feel it cuts off a part of them that is (and in their minds, should be) a part of their medical involvement.

Concern That The Training Process "Changes Who You Are"

Again, a concern shared by male and female students, this relates to all the ways in which they feel the professionalization process demands conformity to a single model of professional conduct and attributes.

Three Summary Checklists of Group Interview Issues follow. The first compares women's concerns among the eight MODVOPPP health professions included in this study; the second compares men's. The third compares men's and women's responses in this profession only.

APPENDIX E

SUMMARY CHECKLIST OF FEMALE GROUP INTERVIEW ISSUES
COMPARATIVE MODVOPPP PROFESSIONS

	M	O	D	V	O	P	P	P
STRUCTURAL FEATURES								
Lack of Role Models	●	●				●		●
Lack of Support Group of Women		●				●		●
Tracked into Limited Specialties/Options	●	●	●	●		●	●	
Balancing Work/Family	●	●	●	●	●	●	●	
Women's Disadvantage in Background or Size		●	●	●				
Social Problems	●							
ABSENCE OR INADEQUACY OF FACILITIES	●	●	●	●		●		
CHARACTERISTICS OF THE PROFESSION AND ITS WORK								
Life and Death Responsibility								
Relative Status of the Profession					●			●
ABSENCE OF OR DIFFICULTY IN GAINING ACCESS TO RESOURCES								
Lack of Encouragement and/or Information	●	●	●	●	●		●	●
Access to the Informal Network	●	●	●		●	●	●	●
Absence of Required Personal Attributes	●	●	●	●	●	●	●	●
Absence or Concern about Meeting Formal Requirements			●			●	●	
Access to Financing	●	●	●	●	●	●	●	
NEGATIVE ATTITUDES/BEHAVIORS OF OTHERS								
Incidents of Sexism	●	●	●	●	●	●	●	●
Resentment by Male Peers	●	●	●	●	●	●	●	
Client Prejudices	●	●	●	●	●	●	●	
Staff/Employee Prejudices	●		●			●	●	●
IMPACT ON SELF OF TRAINING								
Double Binds	●	●	●	●		●	●	●
Women Feel Must Work Harder	●	●	●	●	●	●	●	●
Problems with Maintaining Relationships	●	●	●	●		●		
Competition and Academic Pressures								
Feeling You Must Turn off Emotions	●	●	●					●
Concern That the Training Process Changes You	●							

SUMMARY CHECKLIST OF MALE GROUP INTERVIEW ISSUES
COMPARATIVE MODVOPPP PROFESSIONS

	M	O	D	V	O	P	P	P
STRUCTURAL FEATURES								
Lack of Role Models								
Lack of Support Group of Women								
Tracked into Limited Specialties/Options								
Balancing Work/Family								
Women's Disadvantage in Background or Size								
Social Problems								
ABSENCE OR INADEQUACY OF FACILITIES								
CHARACTERISTICS OF THE PROFESSION AND ITS WORK								
Life and Death Responsibility	●	●						
Relative Status of the Profession		●	●		●	●	●	●
ABSENCE OF OR DIFFICULTY IN GAINING ACCESS TO RESOURCES								
Lack of Encouragement and/or Information								●
Access to the Informal Network								
Absence of Required Personal Attributes								
Absence or Concern about Meeting Formal Requirements		●	●		●	●	●	●
Access to Financing	●	●	●	●		●	●	
NEGATIVE ATTITUDES/BEHAVIORS OF OTHERS								
Incidents of Sexism								
Resentment by Male Peers								
Client Prejudices								
Staff/Employee Prejudices								
IMPACT ON SELF OF TRAINING								
Double Binds								
Women Feel Must Work Harder								
Problems with Maintaining Relationships	●	●		●		●		
Competition and Academic Pressures	●	●	●	●		●	●	●
Feeling You Must Turn off Emotions								
Concern That the Training Process Changes You	●	●						

SUMMARY CHECKLIST OF GROUP INTERVIEW ISSUES

VETERINARY MEDICINE

	WOMEN	MEN
STRUCTURAL FEATURES		
Lack of Role Models		
Lack of Support Group of Women		
Tracked into Limited Specialties/Options	●	
Balancing Work/Family	●	
Women's Disadvantage in Background or Size	●	
Social Problems		
ABSENCE OR INADEQUACY OF FACILITIES	●	
CHARACTERISTICS OF THE PROFESSION AND ITS WORK		
Life and Death Responsibility		
Relative Status of the Profession		
ABSENCE OF OR DIFFICULTY IN GAINING ACCESS TO RESOURCES		
Lack of Encouragement and/or Information	●	
Access to the Informal Network		
Absence of Required Personal Attributes	●	
Absence or Concern about Meeting Formal Requirements		
Access to Financing	●	●
NEGATIVE ATTITUDES/BEHAVIORS OF OTHERS		
Incidents of Sexism	●	
Resentment by Male Peers	●	
Client Prejudices	●	
Staff/Employee Prejudices		
IMPACT ON SELF OF TRAINING		
Double Binds	●	
Women Feel Must Work Harder	●	
Problems with Maintaining Relationships	●	●
Competition and Academic Pressures		●
Feeling you must Turn off Emotions		
Concern that the Training Process Changes You		

APPENDIX F

SUMMARIES OF CHARACTERISTICS OF SCHOOLS AND INTERVIEW RESPONDENTS IN EIGHT MODVOPPP PROFESSIONS

SCHOOL VISIT SITE SELECTION BY CHARACTERISTICS

	# of Field Sites	Urban	Rural	North Central (1)	South	Northeast	West	Public	Private	Free-Standing	Univ. Affiliate	Physically Indep.	Medical Center	Part of Campus	High Status (2)	Low Status (2)	High % Women Enrolled (3)	Low % Women Enrolled (3)
Medicine	9	8	1	1	3	2	3	5	4	1	8	1	2	6	6	3	7	2
Osteo. Med.(4	2	-	-	-	-	-	-	-	-	-	-	-	-	-	N/A	N/A	1	1
Dentistry	5	5	0	0	2	1	2	3	2	0	5	1	2	2	2	3	4	1
Vet. Med.	2	1	1	1	0	0	1	2	0	0	2	0	0	2	N/A	N/A	1	1
Optometry	2	2	0	0	0	1	1	1	1	1	1	1	0	1	1	1	1	1
Podiatry (4)	2	-	-	-	-	-	-	-	-	-	-	-	-	-	N/A	N/A	2	0
Pharmacy	3	3	0	0	0	1	2	1	2	1	2	1	1	1	1	2	2	1
Pub. Hlth.	2	2	0	0	1	0	1	1	1	0	2	1	0	1	2	0	2	0
TOTAL	27	21	2	2	6	5	10	13	10	3	20	5	5	13	N/A	N/A	20	7

(1) The four regions are comprised of the following states:

North Central: Illinois, Indiana, Iowa, Michigan, Minnesota, Missouri, Ohio, Idaho, Wisconsin, Kansas, Montana, Nebraska, North Dakota, South Dakota, Utah, Wyoming.

South: District of Columbia, Maryland, West Virginia, Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Virginia.

Northeast: Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont, Delaware, New Jersey, New York, Pennsylvania.

West: Arizona, New Mexico, Oklahoma, Texas, Colorado, Alaska, California, Hawaii, Nevada, Oregon, Washington

(2) Where known or applicable, status is defined as the degree of respect accorded a given institution by members of the same profession.

(3) Higher or lower than the national proportion of women enrolled by profession.

(4) This information has been intentionally omitted since the combination of characteristics might identify which schools were visited. Thus totals for site characteristics do not add to 27.

SUMMARY OF INDIVIDUAL INTERVIEWS

		Administrator Interviews															Faculty Interviews								
	# of Schools	Deans, Presidents, Chancellors			Asst. or Assoc. Deans			Affirmative Action (1)			Other Admin. (2)			Total Admin.			Pre-Clinical Faculty			Clinical Faculty			Total Faculty		
		M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Medicine	9	10	--	10	11	5	16	--	5(1)	5(1)	11	15	26	32	25	57	8	13	21	19	21	40	27	34	61
Osteo. Med.	2	3	--	3	4	--	4	--	--	--	4	1	5	11	1	12	5	--	5	4	6	10	9	6	15
Dentistry	5	5	--	5	13	--	13	--	--	--	1	4	5	19	4	23	5	3	8	16	5	21	21	8	29
Vet. Med.	2	1	--	1	4	--	4	--	1	1	3	2	5	8	3	11	2	2	4	9	5	14	11	7	18
Optometry	2	3	--	3	2	--	2	--	--	--	2	2	4	7	2	9	4	1	5	3	1	4	7	2	9
Podiatry	2	2	--	2	3	1	4	1	--	1	1	2	3	7	3	10	3	10	13	5	1	6	8	11	19
Pharmacy	3	3	--	3	6	--	6	--	--	--	5	6	11	14	6	20	4	3	7	5	4	9	10	7	17
Pub. Hlth. (5)	2	1	--	1	2	1	3	--	--	--	--	1	1	3	2	5	N/A	N/A	N/A	5	5	10	5	5	10
TOTALS	27	28	--	28	45	7	52	1	6	7	27	33	60	101	46	147	31	32	63	67	48	114	98	80	178

(1) Of the 5 Affirmative Action, 4 were university-wide and therefore covered, in three instances, dentistry, and in one instance, pharmacy, as well as medicine.

(2) Includes Registrars, Business Managers, Administrative Assistants, Directors of Special Programs, Centers, Institutes or Grants, Financial Aid Officers.

SUMMARY OF INDIVIDUAL INTERVIEWS (Continued)

[illegible]vidual Student Interviews																		Intern & Resident Interviews											
1st Year			2nd Year			3rd Year			4th Year			Unknown Or "Other" Students			Total Individual Students (3)			Site Admin.			Interns & Residents			Total Admin., Interns & Residents			Total Respondents		
M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
6	21	27	4	13	17	2	9	11	1	5	6	2	13	15	15	61	76	3	1	4	9	11	20	12	12	24	86	132	218
3	3	6	1	2	3	2	4	6	--	1	1	--	--	--	6	10	16	←				N/A				→	26	17	43
1	7	8	5	9	14	1	--	1	2	7	9	4	1	5	13	24	37	1	--	1	--	2	2	1	1	2	54	37	91
5	4	9	2	5	7	--	4	4	--	2	2	--	1	1	7	16	23	1	--	1	2	3	5	3	3	6	29	29	58
--	4	4	1	5	6	3	2	5	1	5	6	--	--	--	5	16	21	←				N/A				→	19	20	39
--	1	1	--	2	2	1	2	3	4	2	6	--	--	--	5	7	12	1	--	1	3	--	3	4	--	4	24	21	45
--	1	1	--	5	5	1	7	8	1	2	3	6	7(4)	13(4)	8	22	30	←				N/A				→	32	35	66
6	7	13	--	--	--	--	--	--	--	--	--	--	--	--	6	7	13	1	--	1	2	4	6	3	4	7	17	18	35
21	48	69	13	41	54	10	28	38	9	24	33	12	22	34	65	163	228	7	--	7	16	20	36	23	20	43	287	309	595

(3) Male students were not a key respondent group in the study until after submission of the Interim Report at which time the study's focus was expanded to include them in greater numbers. The imbalance between male and female student interviews remains because URSA visited half of the schools in the study (14 of 27) prior to the Interim Report.

(4) Includes 1 fifth-year and 1 sixth-year student.

(5) Hospital Administration and Epidemiology faculty and students combined. Due to varying lengths of training programs, all Public Health students arbitrarily counted as first-year students.

MODVOPPP GROUP INTERVIEW SUMMARY

	Male		Female		Mixed		Total	
	# of Groups	Estimated Average N=7	# of Groups	Estimated Average N=7	# of Groups	Estimated Average N=8	# of Groups	Estimated Total
Medicine	4	28	13	91	--	--	17	119
Osteo. Med.	3	21	3	21	1	8	7	50
Dentistry	1	7	8	56	1	8	10	71
Vet. Med.	--	--	5	35	3	24	8	59
Optometry	2	14	3	21	1	8	6	43
Podiatry	1	7	2	14	--	--	3	21
Pharmacy	2	14	6	42	1	8	9	64
Pub. Hlth.	1	7	1	7	--	--	2	14
TOTAL	14	98	41	287	7	56	62	441